APPLICATION FOR CERTIFICATION
00-AFC-14

El Segundo Power Redevelopment Project

Response to Data Requests

Submitted to the

California Energy Commission

Submitted by

El Segundo Power II LLC

DATA RESPONSE GUIDE

Data Request	Applicant's Response Date	Source of Data Request	Page
Air Quality			
1	March 28	CEC	AQ-2
2	March 28	CEC	AQ-4
3	March 28	CEC	AQ-4
4	March 28	CEC	AQ-5
5	March 28	CEC	AQ-5
29	March 28	CEC	AQ-6
48	March 28	COES	AQ-6
49	March 28	COES	AQ-7
50	March 28	COES	AQ-7
51	March 28	COES	AQ-8
CCC-10	April 13	CCC	AQ-8
Biological Resources			
6	March 28	CEC	BIO-3
7	March 28	CEC	BIO-5
8	March 28	CEC	BIO-7
9	March 28	CEC	BIO-8
10	March 28	CEC	BIO-10
45	March 28	COES	BIO-13
52	March 28	COES	BIO-13
53	March 28	COES	BIO-13
54	March 28	COES	BIO-15
55	March 28	COES	BIO-16
78	March 28	CCC	BIO-17
79	March 28	CCC	BIO-19
80	March 28	CCC	BIO-20
81	March 28	CCC	BIO-20
82	March 28	CCC	BIO-24
83	March 28	CCC	BIO-24
84	March 28	CCC	BIO-27
85	March 28	CCC	BIO-27
CCC-1	April 18	CCC	BIO-27
CCC-17	April 18	CCC	BIO-28
CCC-25	April 18	CCC	BIO-29
6s	April 18	CEC	BIO-31
7s	April 18	CEC	BIO-31
8s	April 18	CEC	BIO-32

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Data Request	Applicant's Response Date	Source of Data Request	Page
9s	April 18	CEC	BIO-33
81s	April 18	CCC	BIO-33
84s	April 18	CCC	BIO-34
USFWS-1	April 18	USFWS	BIO-34
USFWS-2	April 18	USFWS	BIO-35
USFWS-3	April 18	USFWS	BIO-36
Cultural Resources			
11	March 28	CEC	CUL-2
12	March 28	CEC	CUL-2
13	March 28	CEC	CUL-6
14	March 28	CEC	CUL-6
15	March 28	CEC	CUL-7
16	March 28	CEC	CUL-10
17	March 28	CEC	CUL-11
18	March 28	CEC	CUL-11
90	April 18	CEC	CUL-12
91	April 18	CEC	CUL-12
CCC-18	April 18	CCC	CUL-12
15s	April 18	CEC	CUL-13
Cumulative Impacts			
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77s	April 18	COES	CUM-5
Efficiency			
19	March 28	CEC	EFF-2
Geology and Paleontology			
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23	March 28	CEC	GEO-4
24	March 28	CEC	GEO-6
25	March 28	CEC	GEO-7
CCC-11 (CCC-6)	April 18	CCC	GEO-7
CCC-12 (CCC-7)	April 18	CCC	GEO-8
CCC-13	April 18	CCC	GEO-9
CCC-14	April 18	CCC	GEO-9
CCC-15	April 18	CCC	GEO-9

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Data Request	Applicant's Response Date	Source of Data Request	Page
Hazardous Material Handling			
70	March 28	COES	HMH-2
71	March 28	COES	HMH-2
72	March 28	COES	HMH-3
73	March 28	COES	HMH-4
92	April 18	CEC	HMH-5
93	April 18	CEC	HMH-7
94	April 18	CEC	HMH-7
95	April 18	CEC	HMH-7
Land Use			
26	March 28	CEC	LU-2
27	March 28	CEC	LU-2
40	March 28	CEC	LU-2
41	March 28	CEC	LU-3
61	March 28	CEC	LU-3
65	March 28	CEC	LU-3
66	March 28	CEC	LU-3
67	March 28	CEC	LU-3
CCC-4	April 18	CCC	LU-4
CCC-19	April 18	CCC	LU-4
40s	April 18	CEC	LU-4
66s	April 18	CEC	LU-4
67s	April 18	CEC	LU-5
Noise			
28	March 28	CEC	NOI-2
133	April 13, April 18	CEC	NOI-2
134	April 13, April 18	CEC	NOI-4
CCC-21	April 18	CCC	NOI-5
28s	April 18	CEC	NOI-5
Project Description			
35	March 28	COES	PD-3
36	March 28	COES	PD-3
37	March 28	COES	PD-3
38	March 28	COES	PD-3
39	March 28	COES	PD-3
42	March 28	COES	PD-4

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Data Request	Applicant's Response Date	Source of Data Request	Page
43	March 28	COES	PD-4
44	March 28	COES	PD-4
46	March 28	COES	PD-4
47	March 28	COES	PD-4
58	March 28	COES	PD-5
59	March 28	COES	PD-5
60	March 28	COES	PD-5
88	March 28	COES	PD-5
CCC-5	April 18	CCC	PD-6
CCC-6	April 18	CCC	PD-6
CCC-7	April 18	CCC	PD-7
COES-1	April 18	COES	PD-7
COES-2	April 18	COES	PD-8
38s	April 18	COES	PD-8
46s	April 18	COES	PD-9
88s	April 18	COES	PD-9
Socioeconomics			
68	March 28	COES	SOC-2
69	March 28	COES	SOC-2
96	April 18	CEC	SOC-3
97	April 18	CEC	SOC-3
Soil and Water			
112	April 18	CEC	SOIL-3
113	April 18	CEC	SOIL-4
114	April 18	CEC	SOIL-4
115	April 18	CEC	SOIL-4
116	April 18	CEC	SOIL-5
117	April 18	CEC	SOIL-5
118	April 18	CEC	SOIL-6
119	April 18	CEC	SOIL-6
120	April 18	CEC	SOIL-9
121	April 18	CEC	SOIL-9
122	April 18	CEC	SOIL-9
123	April 18	CEC	SOIL-10
124	April 18	CEC	SOIL-10
125	April 18	CEC	SOIL-11

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Data Request	Applicant's Response Date	Source of Data Request	Page
126	April 18	CEC	SOIL-11
127	April 18	CEC	SOIL-12
128	April 18	CEC	SOIL-12
129	April 18	CEC	SOIL-12
130	April 18	CEC	SOIL-13
131	April 18	CEC	SOIL-14
CCC-2	April 18	CCC	SOIL-15
CCC-3	April 18	CCC	SOIL-15
CCC-8	April 18	CCC	SOIL-15
CCC-9	April 18	CCC	SOIL-16
CCC-16	April 18	CCC	SOIL-16
CCC-24	April 18	CCC	SOIL-16
Traffic and Transportation			
30	March 28	CEC	T&T-2
31	March 28	CEC	T&T-2
32	March 28	CEC	T&T-3
33	March 28	CEC	T&T-3
34	March 28	CEC	T&T-4
62	March 28	CEC	T&T-4
63	March 28	CEC	T&T-5
64	March 28	CEC	T&T-5
87	March 28	COMB	T&T-5
CCC-20	April 18	CCC	T&T-6
33s	April 18	CEC	T&T-7
62s	April 18	CEC	T&T-11
Transmission Line Safety and Nuisance			
74	March 28	COES	TLSN-2
75	March 28	COES	TLSN-2
76	March 28	COES	TLSN-3
Transmission System Engineering			
98	April 18	CEC	TSE-2
74s	April 18	CEC	TSE-2
75s	April 18	CEC	TSE-2
Visual Resources			
56	March 28	COES/COMB	VIS-2
57	March 28	COES/COMB	VIS-3

Data Response Guide (Cont.)

Data Request	Applicant's Response Date	Source of Data Request	Page
86	March 28	COMB	VIS-3
89	March 28	COMB	VIS-3
99	April 13	CEC	VIS-4
100	April 13	CEC	VIS-5
101	April 13	CEC	VIS-5
102	April 13	CEC	VIS-5
103	April 13	CEC	VIS-6
104	April 13	CEC	VIS-6
105	April 13	CEC	VIS-7
106	April 13	CEC	VIS-7
107	April 13	CEC	VIS-8
108	April 13	CEC	VIS-9
109	April 13	CEC	VIS-9
110	April 13	CEC	VIS-10
111	April 13	CEC	VIS-18
CCC-22	April 13	CCC	VIS-18
Waste Management			
CCC-23	April 18	CCC	WM-2
Worker Safety			
132	April 18	CEC	WS-2

RESPONSE TO DATA REQUESTS

LIST OF ATTACHMENTS

Attachment 1	Data Request No. 1 - Recently Acquired ERC Certificates
Attachment 2	Biological Resources Data Requests – Revised Tables 5.6-8 through 5.6-13 (Abundance and Biomass Data for 1997 – 1999 for Units 1, 2, 3, and 4)
Attachment 3	Data Request No. 54 – Revised Figure 5.6-8 (Near-Shore Environment Within Santa Monica Bay), Indicating Location of Pratte's Reef
Attachment 4	Data Request No. 12 – Revised Figure J-3 (Kramer Staging Area)
Attachment 5	Data Request No. 15 – Sensitivity Analysis of Water Lines Associated with the El Segundo Power Redevelopment Project, Los Angeles County, California
Attachment 6	Data Request No. 77 – Revised Table 5.20-1 (El Segundo Power Redevelopment Project Cumulative Projects List)
Attachment 7	Data Request No. 19 - Figure 5.19-1 (Plant Heat and Material Diagram)
Attachment 8	Data Request No. 23 - Revised Grading and Drainage Plans Highlighting Cut and Fill Areas
Attachment 9	Data Request No. 24 - Revised Figure 5.3-2 (Geologic Units in the Project Area) indicating Oil Wells in the Project Area
Attachment 10	Data Request No. 25 - Beach Erosion Control Plan
Attachment 11	Data Request No. 70 – Figure 70-1 (Predicted Ammonia Spill Scenario)
Attachment 12	Data Request No. 26 – Final Recorded Parcel Map for the ESGS and SCE Tank Farm Properties
Attachment 13	Data Request No. 27 – Legal Property Descriptions and Property Maps of the ESGS and SCE Tank Farm Properties
Attachment 14	Data Requests No. 40 & 41 – Tank Farm Parcels
Attachment 15	Data Requests No. 41 – Revised Grading and Drainage Plans Showing Parcel Information
Attachment 16	Data Request No. 61 - Revised Table 3.12-1 (LORS Related to Facility Design)
Attachment 17	Data Request No. 28 - Tabular Leq, L50, and L90 Noise Data

RESPONSE TO DATA REQUESTS

LIST OF ATTACHMENTS

Attachment 18	Data Request No. 56 – KOP #7 Analysis and Photo Simulations
Attachment 19	Data Request No. 121 – Revised Figure 3.5-1A showing Location of Discharge Structure No. 002
	Supplemental Data Request No. 74 – Revised Figure 3.5-1A showing Location of New Generator Lead Poles
Attachment 20	Data Request No. 131 – "Will Serve" Letter, West Basin Municipal Water District, April 18, 2001
Attachment 21	Supplemental Data Request No. 75 – Figure 74s (230 kV Transmission Line Corridor from ESGS to El Nido Substation)

TECHNICAL AREA: AIR QUALITY

SUMMARY OF AIR QUALITY DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, several data requests have been asked and answered regarding Air Quality. They are listed in the table below. ESP II believes that no issues have presented themselves as significant barriers to completion of the discovery phase of the project. The pending "Determination of Compliance" to be issued by South Coast Air Quality Management District will provide Air Permit Conditions that resolve remaining Air Quality issues.

The following Data Requests have been received regarding Air Quality:

Data Request	Applicant's Response Date	Source of Data Request	Page
1	March 28	CEC	AQ-2
2	March 28	CEC	AQ-4
3	March 28	CEC	AQ-4
4	March 28	CEC	AQ-5
5	March 28	CEC	AQ-5
29	March 28	CEC	AQ-6
48	March 28	COES	AQ-6
49	March 28	COES	AQ-7
50	March 28	COES	AQ-7
51	March 28	COES	AQ-8
CCC-10	April 13	CCC	AQ-8

TECHNICAL AREA: AIR QUALITY
AUTHOR: JOSEPH M. LOYER

BACKGROUND

The identification and approval of appropriate emissions offsets is frequently a cause of project delays. The applicant identifies several sources of offsets for the air quality impacts associated with the project emissions (AFC page 5.2-70 to -77). In this section of the AFC, the applicant identifies the need for further ERCs to be developed or negotiated and the need to develop interpollutant offset trading ratios for NOx, SOx and VOC for PM10. Staff encourages the Applicant to expedite the process of identifying and securing sufficient verifiable emission offsets. Staff also encourages the applicant to seek combustion PM10 ERCs originating in the same area as the project PM10 emission impacts to mitigate any potential environmental justice impacts from the proposed project PM10 emissions.

DATA REQUEST

1. Please provide documentation of all proposed offsets. This documentation may be any one of the following:
   - A Letter of Intent,
   - An Options Contract, or
   - An actual certificate.

Response No. 1: Table 1-1 shows an update of the credits proposed for the project.

Documentation of the credits for the shutdown of Units 1 and 2 is currently under review by the SCAQMD. Based on recent discussions with SCAQMD staff, we anticipate that the calculation of credits available from the shutdown of Units 1 and 2 will be updated in early April based on recent operations of those units.

The applicant has previously provided the CEC with copies of the contracts for most of ERCs that have been purchased. These ERCs are listed in Table 1-2. The contracts were included in the AFC at Appendix I.

TABLE 1-1
SUMMARY OF TOTAL OFFSETS REQUIRED AND AVAILABLE

Source	NOx (lbs/day)	CO (lbs/day)	SOx (lbs/day)	ROG (lbs/day)	PM_{10} (lbs/day)
Offsets Required		823	94	304	813
Offsets Available:					
Shutdown of Units 1 and 2		1600	11	105	145
Purchase of ERCs			245	314	23
Interpollutant Transfers			(239)		119.5
Enhanced Street-Cleaning					1674
ERCs under development or negotiation		1391	77	442.4	1144.6
SCAQMD Priority Reserve					813
Total Offsets Available		2991	94	861.4	3919.1
Remaining Offset Balance	0	2168	0	557.4	3106.1

TABLE 1-2
CREDIT CONTRACTS ALREADY PROVIDED TO THE CEC

Source Cert. No.	Location	Status	CO (lbs/day)	SOx (lbs/day)	ROG (lbs/day)	PM_{10} (lbs/day)	NO_x (lbs/day)
Honeywell	Commerce	P			33		
National Offsets	Torrance	P			47		
National Offsets	Torrance	P			50		
National Offsets	Torrance	P			70		
ARCO	Commerce	P		245			
Aerochem		P				6	
Honeywell		P			114		
Mobil/Exxon		P					70
Total				245	314	6	70

Status codes: P: ERCs have been acquired through a purchase agreement
O: ERCs have been acquired through an option agreement
N: ERC final purchase pending, binding contracts have been signed.

In addition, since the AFC filing the applicant has acquired the credits shown in Table 1-3 and the contracts for these credits are contained in Attachment 1.

TABLE 1-3
RECENTLY ACQUIRED CREDITS

Source Cert. No.	Location	Status	CO (lbs/day)	SOx (lbs/day)	VOC (lbs/day)	PM_{10} (lbs/day)	NO_X (lbs/day)
Kenny Sandblasting		P				7	
Multi Fuels Marketing Cc		P				2	
Multi Fuels Marketing Cc		P		2			
Multi Fuels Marketing Cc		P					4
US Tile		P				3	
Multi Fuels Marketing Cc		P				5	
Union Carbide		P					20
Total				2		17	24

The Memorandum of Understandings for enhanced street cleaning was previously provided to the CEC under a separate confidential filing.

ERCs under development or negotiation is confidential information. Documentation will be provided upon finalization of agreements.

The applicant has also entered into discussions with the SCAQMD to access the PM_{10} Priority Reserve based on proposed revisions to SCAQMD Rule 1309.

2. Please provide full and detailed documentation of any proposed mitigation measures the applicant is pursuing to offset the potential project impacts.

Response No. 2: The proposed mitigation measures for the project were previously provided in the AFC. Mitigation measures for project operation will consist of acquisition of emission reduction credits as stipulated in the AFC with the revisions noted above. Mitigation measures for project construction will be as stipulated in the AFC Section 5.2.5.

3. Please provide full documentation for any interpollutant-trading ratio developed in conjunction with the South Coast Air Quality Management District.

Response No. 3: The South Coast Air Quality Management District is responsible for developing the interpollutant-trading ratios for the project. They will be making this determination based on previous analyses performed by the District for other projects in the area.

4. Please identify all viable combustion based PM10 ERCs available which originate in the same vicinity as the proposed project PM10 impacts.

Response No. 4: The only viable PM_{10} ERCs identified in the same vicinity of the project are street sweeping credits and credits generated from Units 1 and 2.

BACKGROUND

The applicant did not include the contribution of ammonia slip to the formation of secondary PM10. Ammonia slip can contribute to the formation of secondary PM10 by reacting with NOx and SOx to form nitrates and sulfates. This reaction can contribute to existing violations of the PM10 ambient air quality standards.

DATA REQUEST

5. Please evaluate the contribution of ammonia slip emissions from the proposed power plant on the formation of secondary PM10.

Response No. 5: Adding more ammonia to the ambient air will result in the immediate formation of ammonium nitrate particulate only if the area is ammonia-limited; that is, if there are excess acidic nitrates and sulfates available for reaction, the addition of ammonia to the atmosphere will result in the formation of ammonium nitrate and sulfate compounds. However, if the area is ammonia-rich, adding more ammonia to the air will not automatically result in more ammonium nitrate formation because the area is NO_x and SO_x limited. An examination of 1997 PM_{10}, PM_{10} nitrate, and PM_{10} sulfate concentrations for the Hawthorne monitoring station indicates that the El Segundo area probably can be characterized as mostly ammonia-rich, except during summer, when it becomes somewhat marginal with periods that are ammonia-poor.

Because data on ambient ammonia concentrations are not available, it is necessary to deduce ammonia concentrations indirectly based on available data regarding nitrate and sulfate concentrations. Ammonium nitrate concentrations are low to nonexistent under ammonia-poor conditions. In general, if no nitrates are present, the conditions are clearly ammonia-poor. Under ammonia-rich conditions, fairly large amounts of nitrates are found, since all available sulfuric acid has been neutralized. The 1997 Hawthorne data show occasional episodic nitrate events, during which the aerosol mass becomes predominantly composed of nitrates, such as occasionally occur in major urban areas of California.

The Hawthorne data described above suggest that the El Segundo project area is mainly NO_x/SO_2 limited, so that nitrate formation will be most effectively controlled by minimizing NO_x and SO_2 emissions from the turbines. The proposed 2 ppm NO_x emission limit (on an annual basis) and the use of natural gas fuel will achieve this objective. Therefore, we believe that ammonium nitrate formation as a result of ammonia slip from the turbines will not be significant. The proposed ammonia slip level of 5 ppm will mitigate any seasonal particulate nitrate formation.

BACKGROUND

There is a potential for visibility impairment due to vapor plumes produced by the project reaching ground level on adjacent roadways. This may affect traffic safety on the local roadways in the vicinity of the project site.

DATA REQUEST

29. Please provide an analysis of the traffic safety impacts resulting from the expected plumes from the project on adjacent roadways.

Response No. 29: Traffic safety impacts associated with plumes from the project stacks would present no safety impacts to traffic along Vista Del Mar Boulevard. Plumes have not historically been an issue to local roadways. The project would increase the height of the stacks, therefore elevating the anticipated height of the plume, and reducing potential impacts to Vista Del Mar Boulevard.

Note to the Reader: Responses to Data Requests 48 through 51 are provided below. These Data Requests originated from the City of El Segundo, and address air quality issues.

48. The Air Quality section of the AFC should clarify why weather data from the Lennox air monitoring station was used instead of data from the Hawthorne air station which is geographically closer to the project site (page 5.2-6).

Response No. 48: Data collected at the Lennox weather station were used to perform the air quality impact modeling for the proposed project because it is the closest weather station to the project site with a South Coast Air Quality Management District- approved meteorological data set. The Lennox weather station is sometimes referred to as the Hawthorne

weather station. Consequently, when the commentor refers to a Hawthorne monitoring station, the commentor may actually be referring to the Lennox weather station. Other than the Lennox/Hawthorne weather station, there is no other Hawthorne weather station where a South Coast Air Quality Management District-approved data set has been collected.

49. It is not clear if the baseline emission for each unit represents the maximum annual operation under full load conditions or if the plant has been operating under partial load conditions. The AFC should indicate the existing operating load related to the maximum potential load.

Response No. 49: As discussed in the AFC (page 5.2-45), the baseline emissions for the existing Units 1-4 are based on actual historical emission levels. The detailed baseline emissions for the existing units are included in the AFC as Appendix I, Table I.3.1. These detailed emission calculations show the actual heat input rates for each existing unit during the baseline period. For reference purposes, the detailed baseline emission calculations also show the maximum rated capacity of each existing unit.

50. The Air Quality section of the AFC should provide a discussion of why the future emissions of units 3 and 4 appear to be significantly higher than the baseline emissions (page 5.2-46). For instance, the current carbon monoxide (CO) emission level is 9 tons per year (Table 5.2-24) but the future level is expected to be 2,465 tons per year (Table 5.2-25). Does this mean the current units do not operate at full capacity? Would the increase in emissions violate any permit requirements or air quality standards? What mitigation measures are proposed for this increase?

Response No. 50: As discussed in the AFC (page 5.2-45), the calculations of future emissions for existing Units 3 and 4 are based on maximum possible daily and annual emission levels. The detailed emission calculations for the future emissions for Units 3 and 4 are included in the AFC as Appendix I, Table I.3.2. These detailed calculations show that the future emissions for Units 3 and 4 are based on operating at maximum hourly operating loads, 24 hrs/day, 365 days per year. There are no existing permit conditions prohibiting this level of operation. In addition, as shown in the AFC (page 5.2-61), there is no expected violation of any air quality standard associated with the future operation of Units 3 and 4 at maximum emission levels. The expected future emissions for Units 3 and 4 were included in the AFC for purposes of full disclosure. Since Units 3 and 4 are existing equipment and not part

of the proposed project, there is no need to propose mitigation measures for the future emissions for Units 3 and 4.

51. Table 5.2-32 describes the proposed emissions from the new equipment. The discussion related to this table should explain why the calculations for the maximum daily emission (lbs/day) do not seem to equate to the maximum annual emissions (tons per year) when the daily emissions are multiplied by 365 days per year and divided by 2000 pounds per ton.

Response No. 51: The AFC does explain the assumptions used to calculate the hourly, daily, and annual emissions (see page 5.2-49). As discussed in the AFC, there are several operating modes assumed for each emission averaging period (i.e., hourly, daily, and annual). Consequently, the emission calculations for the proposed project are not simply the maximum daily emissions multiplied by 365 days per year. The detailed emission calculations included in the AFC (Appendix I, Tables I.3.5a and I.3.5b) show all of the operating modes and emission rates used to calculate maximum hourly, daily, and annual emission levels for the proposed project.

CCC-10. 5.2.1.5 Status of Emission Reduction Credits (ERC's): The application should provide additional information on the current status of proposed or obtained ERC's and any likely impacts to coastal resources (i.e., are ERC's from coastal or non-coastal areas? What are local or dispersed air effects on coastal resources? Etc.).

Response No. CCC-10: Please see the responses to CEC Data Requests 1 through 4 for a discussion of the status of emission reduction credits for the project. Emission reduction credits, per se, will have no direct or indirect impacts on coastal resources. Emission reduction credits are required by air pollution control agencies as part of a regional program to mitigate the cumulative impacts of industrial facility development. Emission reduction credits are not intended to mitigate local air quality impacts. Local air quality (and associated local coastal resource issues) are addressed by requiring projects to use the best available emission control technology to reduce project emissions, and by ensuring that local air quality impacts do not result in any new violations of state and federal ambient air quality standards.

TECHNICAL AREA: BIOLOGICAL RESOURCES

SUMMARY OF BIOLOGICAL DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, several biology issues have been raised. ESP II has filed numerous data request responses regarding these issues. Issues raised include:

1) Intake and outfall structure design and whether system is "Best Technology Available" (BTA)
2) Adequacy of the analysis for impingement related impacts of ESPR to biological resources
3) Accuracy of the thermal modeling and associated impact analysis
4) Ability to reduce impingement during heat treatment evolutions
5) Whether ESPR can be operated under the existing NPDES permit and the legal implications of being an "existing intake" and an "existing discharge"
6) Adjacency of the water supply pipelines to the El Segundo Blue Butterfly Preserve on the Chevron Refinery property, and other terrestrial biological resources in the vicinity of off-site staging and worker parking locations.

Because several of these issues overlap with the Water Resources subject matter area, many Water Resource data requests duplicate Biology data requests. In responding to data requests, most issue areas have been thoroughly explored. The data responses below, as well as those to be filed on April 27, 2001 should provide sufficient information to ensure that ESPR complies with all applicable Laws, Ordinances, Regulations, and Standards, and has no significant impacts.

The following Data Requests have been received regarding Biological Resources:

Data Request	Applicant's Response Date	Source of Data Request	Page
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55	March 28	COES	BIO-16
78	March 28	CCC	BIO-17
79	March 28	CCC	BIO-19
80	March 28	CCC	BIO-20
81	March 28	CCC	BIO-20
82	March 28	CCC	BIO-24
83	March 28	CCC	BIO-24
84	March 28	CCC	BIO-27
85	March 28	CCC	BIO-27
CCC-1	April 18	CCC	BIO-27
CCC-17	April 18	CCC	BIO-28
CCC-25	April 18	CCC	BIO-29
6s	April 18	CEC	BIO-31
7s	April 18	CEC	BIO-31
8s	April 18	CEC	BIO-32
9s	April 18	CEC	BIO-33
81s	April 18	CCC	BIO-33
84s	April 18	CCC	BIO-34
USFWS-1	April 18	USFWS	BIO-34
USFWS-2	April 18	USFWS	BIO-35
USFWS-3	April 18	USFWS	BIO-36

TECHNICAL AREA: BIOLOGICAL RESOURCES
AUTHOR: NOEL DAVIS

BACKGROUND

In the Application for Certification, the applicant has provided an assessment of the biological impacts due to entrainment and impingement at the cooling water intakes. However, the analysis of entrainment impacts was based on studies done in 1981 at the Scattergood Generating Station. CEC staff is concerned that studies done over 20 years ago may no longer be valid. The Application for Certification provides recent information on ichthyoplankton from King Harbor in Redondo Beach and states that validating studies have just been completed to determine whether the King Harbor ichthyoplankton assemblage is representative of ichthyoplankton near the El Segundo Generating Station intakes. However, these recent plankton data are not used in the impact assessment.

APPLICANT'S CLARIFICATION OF BACKGROUND

Attachment 2 provides revised copies of Tables 5.6-8 through 5.6-13. These tables present abundance and biomass data for 1997 – 1999 for Units 1, 2, 3, and 4. A typographical error is corrected in the footnote to accurately restate the biomass units in kilograms.

DATA REQUEST

6. Please provide an assessment of the impacts of entrainment and impingement on nearshore fish and invertebrate populations using the recent plankton data as well as recent information on impingement and the size of fish populations in Santa Monica Bay.

Response No. 6: **Impingement**. Table 5.6-13 was constructed by averaging the impingement data over the last three years, then listing in rank order the seven most abundant species impinged. These numbers were then compared to all known current data (1999) related to standing crop in Santa Monica Bay, or Commercial and Sport Fishing take per year. This data shows that impingement is not a significant impact related to the current operation of Units 1 and 2. The number of fish impinged is insignificant and no state or federally listed endangered or threatened fish have been impinged during the period of record reviewed. In addition, there are no geographical ranges for any state or federally listed endangered or threatened marine fish or invertebrates that come within 15 miles of the project site. Therefore, it is unlikely that such species will be impinged in the future. Fish impinged are primarily those living in the cooling system forebay as the impingement of fish

from Santa Monica Bay is almost non-existent. This monitoring data is current and directly applicable to the ESPR Project as the once-through cooling system will not be modified.

Entrainment. The determination that entrainment is and will not be a significant impact is based on a "worst case" assumption that all plankton entrained will be killed – i.e., the plankton killed will be directly proportional to the volume of water circulated. Nevertheless, although the relative concentration of ichthyoplankton may vary over time, it is assumed that the proportion of the ichthyoplankton in the receiving water affected will remain constant. Comparison of the volume of water circulated by Units 1 and 2 and the ESPR Project with the volume of the receiving water leads to the conclusion of no impact.

In order to further validate this conclusion, the Applicant contacted VanTuna Research Group (VRG) to provide ichthyoplankton data that has been collected over several years at King Harbor in Redondo Beach, approximately five miles to the south of ESGS. After a review of the conditions at the two sites, VRG was then tasked with conducting a validation study to assess applicability of the King Harbor ichthyoplankton data to the ESPR project. This study entailed collection of ichthyoplankton at both sites at the same time during the Fall of 2000, using the same methods as used in their ongoing King Harbor data collection program. The study includes a statistical analysis of similarities of ichthyoplankton communities (abundance and diversity) at the two sites.

As of press time (late December 2000) prior to filing the AFC, the King Harbor validation study was ongoing. Since then, the final report has been completed, and it concludes that there is no statistical difference between the concentrations and communities of ichthyoplankton at King Harbor and the point of intake for Units 1 and 2.

In an effort to provide the most current analysis for the ESPR project, the Applicant has asked VRG to provide King Harbor ichthyoplankton data, which will then be used for analysis of entrainment impacts at El Segundo. A report of this analysis will be forwarded to CEC when it is completed, no later than April 18, 2001.

VanTuna Research Group is a consulting firm established at Occidental College, and founded by Dr. John Stephens, Ph.D. Since the mid-1970s, VRG has concentrated its efforts on marine monitoring and freshwater ecology in the Southern California region. VRG's monitoring programs are funded by various clients, and much of their

funding is provided by grant research work. Principal investigators of the ichthyoplankton at King Harbor are Dr. John Stephens and Dan Pondella. All identification work has been completed by Gary Jordan, a well-known ichthyologist, specializing in the taxonomy of fish larvae/eggs.

Additional detail on the assessment of biological consequences of the cooling water supply can be found in Section 5.6.2.1.3 of the AFC.

The ESGS participated in pilot regional monitoring programs for the Southern California Bight in 1994 and 1998. The results of the pilot programs are being evaluated and will be used to design future pilot monitoring programs and to develop a comprehensive regional monitoring program for the Southern California Bight. Provision IV, Receiving Water Monitoring, of the Monitoring and Reporting Program associated with the NPDES Permit No. CA0001147, issued by the Los Angeles Regional Water Quality Control Board on June 29, 2000, provides for continued participation in the future regional monitoring programs for the Southern California Bight. The NPDES permit can be found in Appendix H-10 in Volume III of the AFC.

BACKGROUND

CEC staff is concerned that several species of commercial and sportfishing importance may be affected by operations of the El Segundo Generating Station. These species include white seabass (*Atractoscion nobilis*), black seabass (*Stereolepis gigas*), California halibut (*Paralichthys californicus*), spiny lobster (*Panulirus interruptus*), and bocaccio (*Sebastes paucispinus*)(petitioned for listing under the federal Endangered Species Act). Even though impingement and entrainment of these species may be low, the populations of these species in Santa Monica Bay may also be low or declining.

DATA REQUEST

7. Please provide an analysis of the impacts of impingement and entrainment by the El Segundo Generating Station cooling water intake on the populations of white seabass (*Atractoscion nobilis*), black seabass (*Stereolepis gigas*), California halibut (*Paralichthys californicus*), spiny lobster (*Panulirus interruptus*), and bocaccio (*Sebastes paucispinus*). Please base this analysis on recent data and consider that the impacts of the El Segundo Generating Station is in addition to whatever fishing pressure there may currently be on each population.

Response No. 7: As reflected in Table 7-1, the total numbers of the identified species of interest impinged at the ESGS (including Units 3 and 4) during 1997, 1998 and 1999 were insignificant. In the last three years, only one species (*Panulirus interruptus*) listed in the above question was impinged at the Unit 1 and 2 forebay. Most of the fish were impinged during heat treatment and originated from populations living in the intake forebay. Additional detail regarding the biological consequences of cooling water supply can be found in Section 5.6.2.1.3 of the AFC.

TABLE 7-1
NUMBER OF INDIVIDUALS OF SELECTED SPECIES IMPINGED - 1997 – 1999

	Unit 1 & 2		Unit 3 & 4		Combined Total 1997-1999	Commercial[3] (lbs) 1999	Sport[4] 1999
Species (Latin Name)	Heat[1]	Normal[2]	Heat[1]	Normal[2]			
Atractoscion nobilis	0	0	36	0	36	246,871	11,512
Stereolepis gigas	0	0	1	0	1	0	0
Paralichthys californicus	0	0	7	0	7	1,327,233	9,285
Panulirus interruptus	14	0	61	55	130	489,254	N.A.
Sebastes paucispinus[5]	0	0	0	0	0	6,456,012	495,873

1 Species impinged during heat treatment.
2 Extrapolated annual impingement during normal operations.
3 Source: 1999 State of California marine fish commercial landings. Data extracted from the PacSIN database.
4 1999 sport fishing take in Santa Monica Bay. Numbers represent number of fish taken in Santa Monica Bay from the sport fishing fleet; however, these numbers of fish taken do not include individual recreational take.
5 Includes all Rockfish.
N.A. Data not available.

BACKGROUND

CEC staff is concerned that populations of fishes and invertebrates in Santa Monica Bay are being impacted by at least three cooling water intake systems, the El Segundo Generating Station, the Scattergood Generating Station, and the Redondo Generating Station. The cumulative impacts analysis in the Application for Certification merely states that the proposed El Segundo Generating Station Power Redevelopment Project will not increase impacts therefore cumulative impacts are negligible. The conclusion of minimal cumulative impact is based on the fact that significant adverse effects from power plant cooling water intakes have not been demonstrated in California. However, CEC staff is not aware that an analysis has been done to specifically determine potential cumulative impacts of power plant cooling water systems on the marine resources of Santa Monica Bay.

DATA REQUEST

8. Please analyze the cumulative impact on the marine resources of Santa Monica Bay of the cooling water intakes of three power plants, the El Segundo Generating Station, the Scattergood Generating Station and the Redondo Generating Station, operating simultaneously. Please consider that these impacts are in addition to the fishing pressure on certain species. Please specifically address the cumulative impacts to white seabass (*Atractoscion nobilis*), black seabass (*Stereolepis gigas*), California halibut (*Paralichthys californicus*), spiny lobster (*Panulirus interruptus*), and bocaccio (*Sebastes paucispinus*).

Response No. 8: As reflected in Table 8-1, the total numbers of individuals of the identified species of interest impinged at the ESGS during 1997, 1998 and 1999 were insignificant. Most of the fish impinged at the ESGS were impinged during heat treatment and originated from populations living in the intake forebay. Therefore it is concluded that the ESGS does not provide a significant contribution to the cumulative impacts, if any, on the identified species of concern. Additional detail regarding the biological consequences of cooling water supply at the ESGS can be found in Section 5.6.2.1.3 of the AFC.

TABLE 8-1
NUMBER OF INDIVIDUALS OF SELECTED SPECIES IMPINGED - 1997 – 1999

Species (Latin Name)	Unit 1 & 2		Unit 3 & 4		Combined Total 1997-1999	Commercial[3] (lbs) 1999	Sport[4] 1999
	Heat[1]	Normal[2]	Heat[1]	Normal[2]			
Atractoscion nobilis	0	0	36	0	36	246,871	11,512
Stereolepis gigas	0	0	1	0	1	0	0
Paralichthys californicus	0	0	7	0	7	1,327,233	9,285
Panulirus interruptus	14	0	61	55	130	489,254	N.A.
Sebastes paucispinus[5]	0	0	0	0	0	6,456,012	495,873

[1] Species impinged during heat treatment.
[2] Extrapolated annual impingement during normal operations.
[3] Source: 1999 State of California marine fish commercial landings. Data extracted from the PacSIN database.
[4] 1999 sport fishing take in Santa Monica Bay. Numbers represent number of fish taken in Santa Monica Bay from the sport fishing fleet; however, these numbers of fish taken do not include individual recreational take.
[5] Includes all Rockfish.
N.A. Data not available.

9. Please discuss whether there may be technologies available and feasible that would reduce the impacts of the cooling water intake on marine resources.

Response No. 9: Impingement consists of holding marine resources by pressure differential across screen grids that protect the cooling water system from entraining marine resources. The El Segundo Generating Station (ESGS) currently utilizes a velocity cap intake system to reduce entrainment. Ongoing compliance monitoring demonstrates that the velocity cap is very effective in preventing entrainment resulting in impingement at the ESGS. Impingement prior to installation of the velocity cap at Units 1 and 2 was 272.2 tons of fish per year. This was reduced to 14.95 tons immediately after installation of the velocity cap in the mid-1950s. Impingement monitoring during 1999 indicates that 0.045 tons (about 90.2 pounds) of fish were impinged at Units 1 and 2.

Most of the fish were impinged during heat treatment and originated from populations living in the intake forebay. Details regarding the biological consequences of cooling water supply at the ESGS can be found in Section 5.6.2.1.3 of the AFC.

The velocity cap intake system used at the ESGS would be considered for implementation today on a coastal once-through power generation facility. Alternatives to the velocity cap include the Gunderboom Marine Life Exclusion System (MLES^{TM}). The MLES is an engineered

system of screens that encloses an intake structure on a once-through facility. Since the screen area is large, water velocities across the screen are small, and the pressure difference that would induce impingement of marine life is small. However, the feasibility of applying this technology on a project of this magnitude in a coastal intake is improbable.

Previous installations of the MLES have been for flow rates that are significantly less than for the ESGS once-through cooling system. The intake is located away from the shoreline and underground tunnels feed water from the ocean. Installation of the MLES is typically along a shoreline or river bank directly surrounding an intake structure. The placement of the ESGS intake away from the shoreline makes the installation of the MLES logistically difficult, if not impossible.

Another technology to reduce impingement is the wedgewire screen. The wedgewire screen operates in a manner similar to the velocity cap, but differs from the velocity cap in that the velocities across the screen are much more uniform than a conventional passive screen. The uniform velocities across the screen would serve to limit the impingement of marine resources when compared to the velocity cap.

Wedgewire screens are not designed for flow rates as high as required for the ESGS once-through cooling system. For a proper installation, multiple screens would need to be installed at the ocean water intake. The use of wedgewire screens would also require a means for clearing the screens to maintain an acceptable intake velocity. This is generally accomplished with an air purge, which essentially dislodges any marine growth and debris that accumulates on the wedgewire screens by backflowing air through the screens. Maintenance of an air purge system would be impossible given the location of the intake in the ocean. Therefore this technology is not feasible for this application.

ESGS's use of a velocity cap can be expected to perform well when compared to the MLES and wedgewire screens. Marine resource impingement at the El Segundo site is currently extremely low, and the incorporation of the MLES or wedgewire screens into the cooling water intake system would not be expected to reduce the impingement rate from its current rate. In addition, installation would require disruption of the ocean floor and modification to the existing discharge line.

Impingement results during normal operations are so low and infrequent, that a statistical analysis to compare differences of alternative technology would be based on a data set with a mean

impingement number for most species ranging from 0 to <1, and very high variance. As a result, it would be very unlikely that any type of analysis, such as a Student "T" test or ANOVA would result in a significant difference between technologies that provided additional benefits. Furthermore, when mean numbers of individuals per species impinged is generally less then 1, and in most cases 0, any incremental improvement would not justify the costs or disruptions to the ocean floor or modification of the existing discharge line associated with the installation of the new technology.

To further address fish impingement, the ESPR Project proposes to initiate a pilot project to investigate the feasibility for a fish removal method prior to heat treatment. This pilot project is described under Applicant's proposed Mitigation Measure BIO-11, in Section 5.6.4 of the AFC. The method to be evaluated in this pilot project will be the deployment of a modified beach seine net in an attempt to scoop fish out of the forebay and return them to the ocean. Evaluation of the success of this program will be based on comparisons from present and historical fish and invertebrate impingement data during heat treatments. If a significant decrease in impingement can be quantified, the method and technique will be incorporated in the appropriate heat treatment protocols.

BACKGROUND

The Application for Certification states that impingement deaths are related to heat treatments done to clear the cooling water system of fouling organisms. CEC staff is concerned that heat treatment may have a greater impact on biological resources than alternative methods to remove fouling organisms.

DATA REQUEST

10. Please provide justification that heat treatment is the least environmentally damaging practical alternative for the control of fouling organisms in the cooling water system.

Response No. 10: The heat treat process is considered to be the BTA to keep the cooling water system free from fouling. The heat treat process is used to remove fouling organisms from the El Segundo Generating Station (ESGS) cooling water system. The heat treat process consists of recycling heated cooling water from the steam surface condenser outlet back to the cooling water intake and sending it through the cooling water system again. This serves to heat the cooling water to a level that

removes biological growth that has accumulated on the cooling water system piping and the tube side of the steam surface condenser. The heat treat process currently is only performed once every six weeks to remove fouling organisms.

Chlorination is used in conjunction with heat treatment to remove biological growth from the condensers under a variance issued by the Los Angeles Regional Water Quality Control Board. This variance was approved by the State Water Resources Control Board and USEPA Region IX. A copy of the variance is included as Attachment H-16, in Volume III of the AFC. Chlorination is discussed in more detail in Section 5.5.1.1.3. One alternative to heat treatment is a more intense chlorination treatment. This alternative was not considered as it would not be consistent with the requirements of the variance.

As reflected in Table 10-1, the total numbers of the identified species of interest impinged during heat treatment at the ESGS during 1997, 1998 and 1999 were not significant. Most of the fish impinged at the ESGS were impinged during heat treatment and originated from populations living in the intake forebay. Therefore it is concluded that the ESGS does not provide a significant contribution to the cumulative impacts, if any, on the identified species of concern. Additional detail regarding the biological consequences of heat treatment of the cooling water system at the ESGS can be found in Section 5.6.2.1.3 of the AFC.

TABLE 10-1
NUMBER OF INDIVIDUALS OF SELECTED SPECIES IMPINGED
DURING HEAT TREATMENT - 1997 – 1999

Species (Latin Name)	Unit 1 & 2 Heat	Unit 3 & 4 Heat	Commercial[1] (lbs) 1999	Sport[2] 1999
Atractoscion nobilis	0	36	246,871	11,512
Stereolepis gigas	0	1	0	0
Paralichthys californicus	0	7	1,327,233	9,285
Panulirus interruptus	14	61	489,254	N.A.
Sebastes paucispinus[3]	0	0	6,456,012	495,873

1. Source: 1999 State of California marine fish commercial landings. Data extracted from the PacSIN database.
2. 1999 Sport fishing take in Santa Monica Bay. Numbers represent number of fish taken in Santa Monica Bay from the sport-fishing fleet; however, these numbers of fish taken do not include individual take.
3. Includes all Rockfish.
N.A. Data not available.

An alternative to the use of the heat treat process is the use of a condenser tube cleaning system (CTCS) in conjunction with a debris filtering system to remove bio-fouling organisms. The CTCS in conjunction with the debris filtering system would serve to keep the steam surface condenser un-fouled but would not provide any means of keeping the cooling water pipes upstream and downstream of the condenser from becoming fouled. The CTCS operates by injecting sponge-rubber balls into the cooling water piping immediately upstream of the steam surface condenser. The sponge-rubber balls are slightly larger diameter than the internal diameter of the condenser tubes and act to scour any bio-growth from the condenser tube walls. Upon exiting the condenser, the balls would be collected by a strainer and recycled through the condenser. The debris filter would be located upstream of the CTCS ball injection to the condenser. It would serve to capture any debris and/or marine organisms that passed through the intake pre-screening systems. The debris filter would then backwash the captured debris and marine organisms to the discharge cooling water piping downstream of the CTCS ball collection strainers.

While the CTCS and debris filtering system would keep the condenser free of fouling organisms, they will not ensure that the cooling water piping upstream and downstream of the condenser remains free from bio-fouling. The CTCS will only maintain the cleanliness of the condenser and keep it free of fouling organisms.

Note to the Reader: Responses to Data Requests 45, 52, 53, 54, and 55 are provided below. These Data Requests originated from the City of El Segundo, and address water and biological resources issues.

BACKGROUND

Attachment 7 in the Application for Certification makes the argument that the intake system of the Scattergood Generating Station, which is similar to the intake of the El Segundo Generating Station, is the best technology available because impacts to aquatic resources are not great. However, since the design and subsequent modification of the intake by the velocity cap, additional technologies may have become available that would further reduce impacts to marine resources.

DATA REQUEST

45. The AFC should describe in more detail the proposed study of heat treatment as indicated on page 1-9.

Response No. 45: This study is discussed in Applicant's proposed mitigation measure BIO-11, in Section 5.6.4, on p. 5.6-65 of the AFC. Proposed mitigation measure BIO-11 provides for a pilot project to investigate the feasibility of a fish removal method prior to heat treatment. The method to be evaluated will be the deployment of a modified beach seine net in an attempt to scoop fish out of the forebay and return them to the ocean. Evaluation of the success of this program will be based on comparisons from present and historical fish and invertebrate impingement data during heat treatments. If a significant decrease in impingement can be quantified, the method and technique will be incorporated in the appropriate heat treatment protocols.

52. The AFC should discuss any plans for the construction of a desalination plant in conjunction with the project, if such a plant is under consideration.

Response No. 52: Construction of a desalination plant is not proposed as a part of the ESPR project. The owner of El Segundo Power LLC was approached by West Basin Municipal Water District to make a small space at the plant site available for a demonstration unit. Discussions are ongoing, but no definitive agreement has been reached.

53. The AFC should include a discussion of any potential environmental impacts from the outfall from the Hyperion Waste Treatment Plant entering the seawater intakes for the power plant with the outfall from the power plant contributing to

biological contamination. This has been raised as a concern with the proposed AES Huntington Beach power plant upgrade and the proximity of Hyperion Waste Treatment Plan to the proposed El Segundo Power Plant project appears to be similar to the circumstances that existing in Huntington Beach.

Response No. 53: The AES Huntington Beach Generating Station has been identified as a potential transporting agent for coliform from offshore discharge of the Orange County Sanitation District (OCSD) outfall. Phase I studies conducted by OCSD in 1999 indicated that the generating station was neither the source nor transport mechanism for the contamination. However, upwelling of the wastewater field by the AES Huntington Beach Generating Station outfall cannot be ruled out as a mechanism for elevating surf zone levels of indicator bacteria.

Dr. Stanley Grant[1] proposed that the sea water circulation cell produced by the Huntington Beach Generating Station offshore cooling water conduits could act as a cross-shelf transport mechanism, bringing subsurface contaminated waters to the surface and surf zone. However, this is only one of a number of the potentially related causes that are being evaluated to develop an understanding of the elevated bacterial levels at Huntington Beach. At this time no direct relationship has been determined between the operation of the once-through cooling system at the AES Generating Station and elevated bacteria levels at Huntington Beach.

Other sources of elevated bacteria levels at Huntington Beach that are also being investigated include:

- Subsurface sewer collection systems
- Nuisance runoff, and
- Natural sources of indicator bacteria in the surf zone.

The most notable difference between the conditions at Huntington Beach and El Segundo is the measurement of bacterial indicators at the adjacent beaches. Elevated levels of bacterial indicators at Huntington Beach have lead to frequent beach closures. However, from May through October of 2000, only one bacterial indicator level exceedance was measured at Dockweiler State Beach at the extension of Grand Avenue (August 7 – 576 Enterococcus organisms per 100 ml vs. a

[1] Grant, S.B., C. Webb, B.F. Sanders, A. Boehm, J.H. Kim, J.A. Redman, A.K. Cho, R. Morse, S. Jiang, N. Gardiner, and A. Brown. 2000. Final Report: Huntington Beach Water Quality Investigation Phase II: An analysis of ocean, surf zone, watershed, sediment and groundwater data, collected from June 1998 through September 2000. Prepared for National Water Research Institute, County of Orange, Cities of Huntington Beach, Fountain Valley, Costa Mesa, Santa Ana and Newport Beach, Orange County Sanitation District.

standard of 104 organisms per 100 ml.)[2] Los Angeles County Department of Health Services beach monitoring staff describe Dockweiler State Beach as very clean and note that elevated bacterial indicator levels, when detected, are related to storm drain discharges.[3]

There are significant and notable differences between the conditions at Huntington Beach and El Segundo, not the least of which is the difference between the conditions in the ocean off of Huntington Beach and Santa Monica Bay. This includes the east-west orientation of Huntington Beach and the north/south orientation of the beaches facing Santa Monica Bay. Also, the distance between the AES Huntington Beach cooling water intake and the OCSD outfall is 4 miles and the distance between the ESRP Project intake and the Hyperion outfall is approximately 6 miles.

There are also significant differences between the AES Huntington Beach intake and the ESRP intake as noted below:

	Huntington Beach	**ESPR**
Maximum Flow	357,000 gpm	143,750 gpm
Intake Dimensions	21 feet by 18 feet	10 feet
Velocity Cap Opening	5 feet	3 feet

The AES Huntington Beach cooling water intake structure is much larger, and the maximum flow circulated is 2½ times the flow at the ESGS.

There are also significant differences between the OCSD and Hyperion wastewater characteristics at the respective sanitary outfall locations. Hyperion provides full secondary treatment, whereas OCSD provides only 75 percent secondary treatment, resulting in higher solids content in the OCSD discharge. In addition, Hyperion discharges in the vicinity of a deep submarine canyon.

54. The AFC should include the location of the recently constructed artificial surf reef, known as Pratte's Reef, on the appropriate maps The AFC should include a discussion of any potential impact on the surf conditions of the reef.

Response No. 54: A revised Figure 5.6-8, Near-Shore Environment Within Santa Monica Bay, indicates the location of Pratte's Reef in relation to the ESGS and

[2] Los Angeles County Department of Public Health, Ocean Monitoring Data, May-October, 2000.
[3] Richard Kebabjian, Los Angeles County Department of Health Services, personal communication, March 19, 2000.

other nearshore structures. This figure is provided as Attachment 3. Pratte's Reef is located in Santa Monica Bay approximately 250 yards south of the Hyperion Treatment Plant outfall structure, and about 1,500 yards north of the ESGS. This artificial reef was installed in September, 2000 at a depth of minus-15 feet below mean sea level, just outside the surf zone.

Since no changes to the intake or discharge structure will be needed for the ESPR project and the flow rates and the physics pertaining to the water flow of the once through cooling water system will remain the same, there will be no changes resulting from the ESPR project to the surfing conditions found at Pratte's Reef.

55. The City is concerned about potential stormwater run-off from potentially contaminated areas discharging to the ocean without treatment other than oil separators (page 3.4-12). The AFC should clarify the extent of potential contamination in the stormwater runoff.

Response No. 55: The NPDES permit for the ESGS requires the development and implementation of a storm water pollution prevention plan (SWPPP) for the facility. The ESGS is required to update the SWPPP to reflect changes in the facility. The objective of the SWPPP is to manage storm water runoff quality by preventing the exposure of materials to storm water, thereby preventing the contamination of storm water runoff. In addition, the discharges from the ESGS are required to comply with effluent limitations. The SWPPP requirements and effluent limitations are described in the NPDES permit issued by the Los Angeles Regional Water Quality Control Board to the ESGS. This Permit is included as Attachment H-10 in Volume III of the AFC.

Note to the Reader: Responses to Data Requests 78 through 85 are provided below. These Data Requests originated from the California Coastal Commission, and address water and biological resources issues.

BACKGROUND

Our concerns are increased given the existing conditions of Santa Monica Bay. As described in the AFC, "(t)he biological community in Santa Monica Bay has been identified as being imbalanced, severely stressed, or known to contain toxic substances in concentrations that are hazardous to human health." (p. 5.5-11). Additionally, Santa Monica Bay is described as impaired on the current 303(d) list due to levels of mercury, cadmium, copper, lead, nickel, silver, zinc, chlordane, DDT,

and PCBs. The AFC does not adequately describe the cumulative impacts of current or proposed ESGS operations when evaluated alongside these other above-mentioned impacts.

We commend the applicant for stipulating to several mitigation measures (in AFC Section 5.6.4, BIO-9, -10, and –11) that partially address our concerns; however, the measures described in the AFC do not adequately mitigate for the known and probable impacts of past, current, and proposed operations.

DATA REQUEST

78. Additional information should be provided regarding the full effect of current and proposed facility operations on entrainment and impingement, and findings of other more recent studies on entrainment and impingement should be included in the CEC's review. We recommend that new studies be conducted to update the findings of the original 316(b) study and to represent new understanding in marine ecosystem interactions and sampling techniques and methodologies.

Response No. 78: **Impingement**. Table 5.6-13 is provided in Attachment 2 to this Data Response package. This table was constructed by averaging the impingement data over the last three years, then listing in rank order the seven most abundant species impinged. These numbers were then compared to all known current data (1999) related to standing crop in Santa Monica Bay, or Commercial and Sport Fishing take per year. This data shows that impingement is not a significant impact related to the current operation of Units 1 and 2. The number of fish impinged is insignificant and no state or federally listed endangered or threatened fish have been impinged during the period of record reviewed. In addition, there are no geographical ranges for any state or federally listed endangered or threatened marine fish or invertebrates within 15 miles of the project site. Therefore, it is unlikely that such species will be impinged in the future. Fish impinged are primarily those living in the cooling system forebay as the impingement of fish from Santa Monica Bay is almost non-existent. This monitoring data is current and directly applicable to the ESPR Project as the once-through cooling system will not be modified.

Entrainment. The determination that entrainment is presently an insignificant impact, and that it will continue to be an insignificant impact, is based on a "worst case" assumption that all plankton entrained will be killed – i.e., the plankton killed will be directly proportional to the volume of water circulated. Although the relative concentration of ichthyoplankton may vary over time, it is assumed that the proportion of the ichthyoplankton in the receiving water affected

will remain constant. Comparison of the volume of water circulated by Units 1 and 2 and the ESPR Project with the volume of the receiving water leads to the conclusion of no impact.

In order to further validate this conclusion, the Applicant contacted VanTuna Research Group (VRG) to provide ichthyoplankton data that has been collected over several years at King Harbor in Redondo Beach, approximately five miles to the south of ESGS. After a review of the conditions at the two sites, VRG was then tasked with conducting a validation study to assess applicability of the King Harbor ichthyoplankton data to the ESPR project. This study entailed collection of ichthyoplankton at both sites at the same time during the Fall of 2000, using the same methods as used in their ongoing King Harbor data collection program. The study includes a statistical analysis of similarities of ichthyoplankton communities (abundance and diversity) at the two sites.

As of press time (late December 2000) prior to filing the AFC, the King Harbor validation study was ongoing. Since then, the final report has been completed, and it concludes that there is no statistical difference between the concentrations and communities of ichthyoplankton at King Harbor and the point of intake for ESGS Units 1 and 2.

In an effort to provide the most current analysis for the ESPR project, the Applicant has asked VRG to provide King Harbor ichthyoplankton data, which will then be used for analysis of entrainment impacts at El Segundo. A report of this analysis will be forwarded to CEC when it is completed, no later than April 18, 2001.

VanTuna Research Group is a consulting firm established at Occidental College, and founded by Dr. John Stephens, Ph.D. Since the mid-1970s, VRG has concentrated its efforts on marine monitoring and freshwater ecology in the Southern California region. VRG's monitoring programs are funded by various clients, and much of their funding is provided by grant research work. Principal investigators of the ichthyoplankton at King Harbor are Dr. John Stephens and Dan Pondella. All identification work has been completed by Gary Jordan, a well-known ichthyologist, specializing in the taxonomy of fish larvae/eggs.

Additional detail on the assessment of biological consequences of the cooling water supply can be found in Section 5.6.2.1.3 of the AFC.

The ESGS participated in pilot regional monitoring programs for the Southern California Bight in 1994 and 1998. The results of the pilot programs are being evaluated and will be used to design future pilot monitoring programs and to develop a comprehensive regional monitoring program for the Southern California Bight. Provision IV, Receiving Water Monitoring, of the Monitoring and Reporting Program associated with the NPDES Permit No. CA0001147, issued by the Los Angeles Regional Water Quality Control Board on June 29, 2000, provides for continued participation in the future regional monitoring programs for the Southern California Bight. The NPDES permit can be found in Appendix H-10 in Volume III of the AFC.

79. Also, the ongoing and potential effects of this project should be considered in combination with the effects of other existing intake and discharge pipes located in the Southern California Bight. This needs to be provided and evaluated as part of a more comprehensive cumulative impact analysis. The survey scheduled for 2002 as part of the Southern California Bight Regional Marine Monitoring Survey (see page 5.5-15 of the AFC) may be an appropriate vehicle to carry out this recommendation.

Response No. 79: Tables 5.6-9 through 5.6-12 are provided in Attachment 2 of this Data Response package. Data provided in these tables indicate that the total numbers of fish impinged at the ESGS during 1997, 1998 and 1999 were insignificant. Most of the fish impinged at the ESGS were impinged during heat treatment and originated from populations living in the intake forebay. Therefore it is concluded that the ESGS does not provide a significant contribution to the cumulative impacts, if any, to the identified species of concern. Additional detail regarding the biological consequences of cooling water supply at the ESGS can be found in Section 5.6.2.1.3 of the AFC.

The ESGS participated in pilot regional monitoring programs for the Southern California Bight in 1994 and 1998. The results of the pilot programs are being evaluated and will be used to design future pilot monitoring programs and to develop a comprehensive regional monitoring program for the Southern California Bight. Provision IV, Receiving Water Monitoring, of the Monitoring and Reporting Program associated with the NPDES Permit No. CA0001147, issued by the Los Angeles Regional Water Quality Control Board on June 29, 2000, provides for continued participation in the future regional monitoring programs for the Southern California Bight. The NPDES permit can be found in Appendix H-10 in Volume III of the AFC.

80. Additional information should also be provided that describes alternatives available to avoid or reduce entrainment or impingement impacts due to the ocean intake and discharge operations (e.g., dry cooling, combination wet/dry cooling, etc.).

Response No. 80: Alternatives to the once-through seawater cooling system for heat rejection at the ESPR Project include wet cooling towers and air-cooled condenser systems. These systems were evaluated and rejected for a number of reasons including space constraints at the ESGS, visual impacts, and reduced efficiency. In addition, the existing once-through seawater cooling system does not result in significant impingement or entrainment impacts. Additional information regarding the evaluation of these alternatives is presented in Section 4.7.5.2 of the AFC.

BACKGROUND

ADEQUACY OF BEST TECHNOLOGY AVAILABLE (BTA): The AFC describes the ocean intake and discharge system as being essentially unchanged since 1956 when a velocity cap was put on the intake. It also states that the determination of BTA for the facility was based on the above-referenced 316(b) study done in 1982 for the nearby Scattergood project. BTA for ocean intake and discharge systems has likely improved over the past twenty to fifty years, and in fact, other coastal power plants have upgraded their systems to reflect newer technologies and findings about the effects of ocean intakes and discharges on marine resources.

DATA REQUEST

81. Additional information should be provided showing whether more recent and appropriate BTA has been developed during the past twenty to fifty years and whether this BTA is applicable to the ESGS facility. The applicant should then describe whether the existing intake and discharge are using BTA or if modifications to the existing structures are proposed to attain BTA.

Response No. 81: **Cooling System Intake**. Impingement consists of holding marine resources by pressure differential across screen grids that protect the cooling water system from entraining marine resources. The El Segundo Generating Station (ESGS) currently utilizes a velocity cap intake system to reduce entrainment. Ongoing compliance monitoring demonstrates that the velocity cap is very effective in preventing entrainment resulting in impingement at the ESGS. Impingement prior to installation of the velocity cap was 272.2 tons of fish per year at Units 1 and 2. This was reduced to 14.95 tons immediately after installation of the velocity cap in the mid-1950s.

Impingement monitoring at Units 1 and 2 during 1999 indicates that 0.045 tons (about 90.2 pounds) of fish were impinged. Most of the fish were impinged during heat treatment and originated from populations living in the intake forebay. Details regarding the biological consequences of cooling water supply at the ESGS can be found in Section 5.6.2.1.3 of the AFC.

The velocity cap intake system used at the ESGS would be considered for implementation today on a coastal once-through power generation facility. Alternatives to the velocity cap include the Gunderboom Marine Life Exclusion System (MLES^{TM}). The MLES is an engineered system of screens that encloses an intake structure on a once-through facility. Since the screen area is large, water velocities across the screen are small, and the pressure difference that would induce impingement of marine life is small. However, the feasibility of applying this technology on a project of this magnitude in a coastal intake is improbable.

Previous installations of the MLES have been for flow rates that are significantly less than for the ESGS once-through cooling system. The intake is located away from the shoreline and underground tunnels feed water from the ocean. Installation of the MLES is typically along a shoreline or river bank directly surrounding an intake structure. The placement of the ESGS intake away from the shoreline makes the installation of the MLES logistically difficult, if not impossible.

Another technology to reduce impingement is the wedgewire screen. The wedgewire screen operates in a manner similar to the velocity cap, but differs from the velocity cap in that the velocities across the screen are much more uniform than a conventional passive screen. The uniform velocities across the screen would serve to limit the impingement of marine resources when compared to the velocity cap.

Wedgewire screens are not designed for flow rates as high as required for the ESGS once-through cooling system. For a proper installation, multiple screens would need to be installed at the ocean water intake. The use of wedgewire screens would also require a means for clearing the screens to maintain an acceptable intake velocity. This is generally accomplished with an air purge, which essentially dislodges any marine growth and debris that accumulates on the wedgewire screens by backflowing air through the screens. Maintenance of an air purge system would be impossible given the location of the intake in the ocean. Therefore this technology is not feasible for this application.

ESGS's use of a velocity cap can be expected to perform well when compared to the MLES and wedgewire screens. Marine resource impingement at the El Segundo site is currently extremely low, and the incorporation of the MLES or wedgewire screens into the cooling water intake system would not be expected to reduce the impingement rate from its current rate. In addition, installation would require disruption of the ocean floor and modification to the existing discharge line.

Impingement results during normal operations are so low and infrequent, that a statistical analysis to compare differences of alternative technology would be based on a data set with a mean impingement number for most species ranging from 0 to <1, and very high variance. As a result, it would be very unlikely that any type of analysis, such as a Student "T" test or ANOVA would result in a significant difference between technologies that provided additional benefits. Furthermore, when mean numbers of individuals per species impinged is generally less then 1, and in most cases 0, any incremental improvement would not justify the costs or disruptions to the ocean floor or modification of the existing discharge line associated with the installation of the new technology.

To further address fish impingement, the ESPR Project proposes to initiate a pilot project to investigate the feasibility for a fish removal method prior to heat treatment. This pilot project is described under Applicant's proposed Mitigation Measure BIO-11, in Section 5.6.4 of the AFC. The method to be evaluated in this pilot project will be the deployment of a modified beach seine net in an attempt to scoop fish out of the forebay and return them to the ocean. Evaluation of the success of this program will be based on comparisons from present and historical fish and invertebrate impingement data during heat treatments. If a significant decrease in impingement can be quantified, the method and technique will be incorporated in the appropriate heat treatment protocols.

Cooling System Discharge. The discharge structure at the El Segundo Generating Station is a point discharge structure. Heated cooling water exits the discharge piping from the ESGS over 2000 feet from the plant intake structure. The only possible alternative to the current point discharge would be the use of a multiple port diffuser for discharge of heated cooling water. The current point discharge at the El Segundo Generating Station can still be considered BTA, as the system would still be considered for new once-through circulating water systems.

The multiple port diffuser discharge consists of a multiple discharge ports spaced out along the length of the discharge tunnel, with a fraction of the total flow exiting the system through each of the ports. The cumulative flow rate and heat duty input into the ocean would not change from the existing single point discharge.

Installation of the multiple port diffuser for discharge would require significant capital expenditures and would require a significant amount disruption to the ocean floor and modification to the existing discharge line. The multiple port discharge diffuser will also place exactly the same flow rate and heat duty into the ocean as the existing single point discharge. Installation of a multiple port discharge diffuser would not improve the temperature differential between the heated discharge water and the surrounding water. The current discharge temperature differential would remain at approximately 20°F with either discharge. Total heat input into the ocean would also not vary using a multiple port discharge diffuser. The single port discharge is presently considered, and will continue to be considered, the BTA for the El Segundo Generating Station and ESPR Project.

BACKGROUND

EFFECTS OF THERMAL DISCHARGES: The application shows that thermal discharges from current facility operations are resulting in mortality of marine species, and that these impacts will continue under the proposed facility upgrade. The basis for much of the AFC's discussion on thermal impacts is from a 1975 study, which is described as including sampling from only two dates, February 7 and 8, 1973.

Our concern is similar to that mentioned above, in that this study may not reflect the current understanding of thermal impacts on marine resources. The information contained in the AFC does not provide an adequate basis to determine the full effect of thermal discharges from current and proposed operations.

APPLICANT'S CLARIFICATION OF BACKGROUND

The only heat-related mortality at the ESGS is associated with heat treatment. Only fish and invertebrates residing in the intake forebay are killed in this operation. During normal operations, thermal discharges are approximately 20° F greater than intake temperatures at the initial point of discharge. The initial point of discharge is the outfall riser located approximately 10 feet above the ocean floor and 20 feet below the ocean surface. Due to the entrainment of large amounts of surrounding water during the discharge, the temperature is reduced to approximately 4° F above ambient at the surface.

The thermal discharges from the current operations and the effect to the marine environment are monitored twice a year as required by the NPDES permit. Protocols and equipment used represent the most up to date and current technologies for monitoring. NPDES Receiving Water Monitoring Reports for ESGS and Scattergood Generating Station for the years 1999, 1998, and 1997 are provided in the AFC Volume III, Appendix H, Attachments H-1, H-2, and H-3, respectively. These reports demonstrate that no effect to the marine environment has resulted from the operations at ESGS. ESPR Project impacts are discussed in section 5.6.2.1.4 of the AFC. This analysis uses both current and historical data.

DATA REQUEST

82. Additional information should be developed through new studies that more fully reflect changes to sampling methodology, ecosystem understanding, and other scientific developments over the past several decades. The CEC should incorporate this new information into its review of the current proposed project, or if the current proposal is approved, CEC approval should include a re-opener that would allow full consideration of new findings. Also as mentioned above, the survey scheduled for 2002 as part of the Southern California Bight Regional Marine Monitoring Survey (see page 5.5-15 of the AFC) may be an appropriate vehicle to carry out this recommendation.

Response No. 82: The Los Angeles Regional Water Quality Control Board issued Waste Discharge Requirements (NPDES Permit No. CA0001147) on June 30, 2000. The Receiving Water Monitoring Requirements of the NPDES permit provides for participation of the ESGS in future regional monitoring programs in the Southern California Bight. A copy of this permit is provided as Attachment H-10 in Volume III of the AFC.

BACKGROUND

EFFECTS OF HEAT TREATMENT ON MARINE RESOURCES: The application states that impingement rates are related to heat treatments done to clear the intake structure of marine organisms. The AFC describes both current and proposed operations as resulting in impacts to numerous species of marine organisms.

DATA REQUEST

83. The applicant should provide more information on alternatives to heat treatment for clearing the ocean intake structure. Additional analysis should be provided on whether these various alternatives are applicable and feasible to both current and proposed ESGS operations.

Response No. 83: The heat treat process is considered to be the BTA to keep the cooling water system free from fouling. The heat treat process is used to remove fouling organisms from the El Segundo Generating Station (ESGS) cooling water system. The heat treat process consists of recycling heated cooling water from the steam surface condenser outlet back to the cooling water intake and sending it through the cooling water system again. This serves to heat the cooling water to a level that removes any biological growth that has accumulated on the cooling water system piping and the tube side of the steam surface condenser. The heat treat process currently is only performed once every six weeks to remove fouling organisms.

Chlorination is used in conjunction with heat treatment to remove biological growth from the condensers under a variance issued by the Los Angeles Regional Water Quality Control Board. This variance was approved by the State Water Resources Control Board and USEPA Region IX. A copy of the variance is included as Attachment H-16, in Volume III of the AFC. Chlorination is discussed in more detail in Section 5.5.1.1.3. One alternative to heat treatment is a more intense chlorination treatment. This alternative was not considered as it would not be consistent with the requirements of the variance.

Another alternative to the use of the heat treat process is the use of a condenser tube cleaning system (CTCS) in conjunction with a debris filtering system to remove bio-fouling organisms. The CTCS in conjunction with the debris filtering system would serve to keep the steam surface condenser un-fouled but would not provide any means of keeping the cooling water pipes upstream and downstream of the condenser from becoming fouled. The CTCS operates by injecting sponge-rubber balls into the cooling water piping immediately upstream of the steam surface condenser. The sponge-rubber balls are slightly larger diameter than the internal diameter of the condenser tubes and act to scour any bio-growth from the condenser tube walls. Upon exiting the condenser, the balls would be collected by a strainer and recycled through the condenser. The debris filter would be located upstream of the CTCS ball injection to the condenser. It would serve to capture any debris and/or marine organisms that passed through the intake pre-screening systems. The debris filter would then backwash the captured debris and marine organisms to the discharge cooling water piping downstream of the CTCS ball collection strainers.

While the CTCS and debris filtering system would keep the condenser free of fouling organisms, they will not ensure that the cooling water

piping upstream and downstream of the condenser remains free from bio-fouling. The CTCS will only maintain the cleanliness of the condenser and keep it free of fouling organisms.

As reflected in Table 83-1, the total numbers of the identified species of interest impinged during heat treatment at the ESGS during 1997, 1998 and 1999 were not significant. Most of the fish impinged at the ESGS were impinged during heat treatment and originated from populations living in the intake forebay. Therefore it is concluded that the ESGS does not provide a significant contribution to the cumulative impacts, if any, on the identified species of concern. Additional detail regarding the biological consequences of heat treatment of the cooling water system at the ESGS can be found in Section 5.6.2.1.3 of the AFC.

TABLE 83-1
NUMBER OF INDIVIDUALS OF SELECTED SPECIES IMPINGED DURING HEAT TREATMENT - 1997 – 1999

Species (Latin Name)	Unit 1 & 2 Heat	Unit 3 & 4 Heat	Commercial[1] (lbs) 1999	Sport[2] 1999
Atractoscion nobilis	0	36	246,871	11,512
Stereolepis gigas	0	1	0	0
Paralichthys californicus	0	7	1,327,233	9,285
Panulirus interruptus	14	61	489,254	N.A.
Sebastes paucispinus[3]	0	0	6,456,012	495,873

1 1999 State of California fresh water and commercial landings.
2 1999 Sport fishing take in the Southern California Bight. Numbers represent commercial passenger fishing fleet. Does not include individual recreational take.
3 Includes all Rockfish.
N.A. Data not available.

BACKGROUND

EFFECTS ON FEDERAL OR STATE-LISTED SPECIES, AND SPECIES OF COMMERCIAL IMPORTANCE: We are also concerned with the probable impacts of proposed facility operations on federal- or state-listed endangered or threatened species and those species of commercial importance (e.g., rockfish). While the application provides some evaluation of effects on these species in the area of the facility, it does not fully evaluate the ongoing impacts of the facility. Impacts are described as not being significant when compared to the overall biomass of Santa Monica Bay, but that does not adequately convey the ongoing loss of hundreds to millions of individual organisms due to facility operations.

DATA REQUEST

84. Information should be provided regarding any effects of the current and proposed facility operations on federally-designated Essential Fish Habitat.

Response No. 84: There are no geographical ranges for any state or federally listed endangered or threatened marine fish or invertebrates within 15 miles of the project site. Additional detail regarding the biological consequences of cooling water supply can be found in Section 5.6.2.1.3 of the AFC.

85. Additional information should be provided that more fully describes the impacts of current and proposed ESGS operations on species of concern, along with the cumulative impacts of ESGS operations and other impacts occurring in Santa Monica Bay, such as those included as reasons for 303(d)-listing.

Response No. 85: There are no geographical ranges for any state or federally listed endangered or threatened marine fish or invertebrates within 15 miles of the project site. Therefore, it is unlikely that such species will be impinged in the future. Additional detail regarding the biological consequences of cooling water supply can be found in Section 5.6.2.1.3 of the AFC. The 303(d) listed pollutants resulting in impairments to Santa Monica Bay are related to other sources. These pollutants are listed in Table 5.5-5 of the AFC. The Los Angeles Regional Water Quality Control Board issued Waste Discharge Requirements (NPDES Permit No. CA0001147) for the ESGS on June 30, 2000. A copy of this NPDES Permit is provided as Attachment H-10 in Volume III of the AFC.

CCC-1. The CEC should require further evaluation to determine whether the original determination of Best Technology Available ("BTA") is still applicable to this proposal. The existing BTA is based largely on studies done several decades ago, using study methodologies that may be out-of-date or inadequate, given more recent knowledge about ecosystem functioning, near shore processes, monitoring, and other elements of BTA review.

Response No. CCC-1: This issue is discussed in the response to Data Request 81, provided above. Additional data requests regarding this issue were received following receipt of this data request; further discussion on BTA issues will be provided in our response to Soil and Water Data Requests 135 – 152, to be submitted separately on or before April 27.

BACKGROUND

The study area is defined as Santa Monica Bay down to the 90 m depth contour, an area that stretches approximately 40 miles along the coast, and extends about eight miles from the shoreline. This study area is likely too large to use in determining project impacts. No basis was provided for using a 90 m depth to describe impacts to the nearshore area, and no basis was given for extending the study area along the entirety of Santa Monica Bay.

- The study did not consider the cumulative effects of this current and proposed project along with other intakes and/or discharges.
- The study did not consider the existing impaired status of Santa Monica Bay.

DATA REQUEST

CCC-17. We are concerned that impacts of the current and proposed facility operations may have been understated due to the above factors. We believe a new study may be needed to more accurately reflect impacts and determine mitigation needs. At the very least, the applicant should provide additional information about the basis for selecting the study area parameters, how the study area correlates to near shore habitat features affected by the facility, and how the study evaluated other intakes and discharges to Santa Monica Bay.

Response No. CCC-17: In order to accurately address impacts (both for the ESGS intake structure and cumulative impacts) to the marine environment, the source water population ranges must first be established. These ranges for the marine species found in the vicinity of the El Segundo Generating Station would generally include the area from the Northwest Pacific to Baja California. Any individuals within this range have the potential to directly or indirectly supply larvae or individuals to the immediate vicinity of the intake structure. However, oceanographic processes and the geographical constraints acting upon the Bay, such as the cyclic ocean circulation pattern (Santa Monica Bay eddy) and temperature regimes tend to hold the source water population to the Bay itself. As such, there is no method to dissect out a smaller subsection of the source water population within the Bay nor would it be appropriate to extend the area beyond the Bay itself. This is the primary motivating fact for the study area chosen for this study along with all previous studies completed in the Bay. Furthermore, a more constrained study area would greatly underestimate the number of potential species that might come in contact with the intake structure, since the habitat surrounding the intake is not appropriate for many of the species of concern. Many of these species come in contact with the intake surrounding environment as a result of normal home range

movement, and not as a result of a self supporting population within the given area.

Cumulative impacts on entrainment should also be confined to the Santa Monica Bay for the above stated reasons. It is also a much more conservative approach based upon the fact that as distance from the intake at El Segundo is increased (to incorporate other intakes), the volume of source water increases at a much greater percentage. This is based on the calculation of the volume of source water, which is a function of a cubed root (volume equals side raised to the third power) surrounding intake structures that are linearly (side raised to the first power) separated from one another. This means that in order to have an impact as distance is increased from the El Segundo intake, volume of water used by other intakes would have to be increasing by a power at least or greater then 3 as one moves away from the source water of the intake structure. This is not the case here or anywhere in California.

CCC-25. *Regarding marine biological resources* – biological impacts associated with the existing and proposed ocean water-cooling systems at El Segundo should be evaluated along with other ocean water-cooling systems at the Scattergood Generating Station, the AES Redondo Beach Generating Station, and the Enron Long Beach District Energy Facility. In addition, the cumulative biological impacts of these systems should be considered in light of the above-mentioned water quality impairment in Santa Monica Bay.

Response No. CCC-25: Santa Monica Bay is not listed as impaired by temperature. Also, the pollutants identified as exceeding water quality standards in Santa Monica Bay are not expected to be present in the discharge from the ESPR. In addition, the effluent limitations established by the Los Angeles Regional Water Quality Control Board in NPDES No. CA0001147 are protective of the beneficial uses of the receiving waters.

Table CCC-25-1 relates the total number of individuals of the selected marine species (as listed by CEC consulting biologist Dr. Noel Davis in Data Request No. 1) impinged for the three once through cooling water systems in Santa Monica Bay to the commercial and sport take. Enron Long Beach District Energy Facility has been excluded for the reasons listed in data response CCC-17. This table clearly shows an insignificant impingement of these species when compared to commercial and sport harvest.

TABLE CCC-25-1
NUMBER OF INDIVIDUALS OF SELECTED SPECIES IMPINGED - 1997 – 1999

	Total Impingement (Norm. op & Heat Treatment) 1997-1999				Combined Total 1997-1999	Commercial[3] (lbs) Est. 1997-1999	Sport[4] Est. 1997-1999
Species (Latin Name)	**ESGS**	**Scattergood**	**Redondo**				
Atractoscion nobilis	36	212	2		250	740,613	34,536
Stereolepis gigas	1	1	0		2	0	0
Paralichthys californicus	7	83	9		99	3,981,699	27,855
*Panulirus interruptus**	130	431	2781		3342	1,467,762	0
Sebastes paucispinus	**No record of take at El Segundo.**						

[1] Species impinged during heat treatment.
[2] Extrapolated annual impingement during normal operations.
[3] 1999 State of California fresh water and commercial landings used to extrapolate for a three year period.
[4] 1999 Sport fishing take in the Southern California Bight used to extrapolate for a three year period. Numbers represent number of individuals per species taken. Does not include individual recreational take.
* Recorded in Biomass (lbs) for comparison to commercial take.

Total biomass of fish species impinged at ESGS, Scattergood, and Redondo for the years 1999, 1998, and 1997 are 3.5, 1.6, and1.7 tons, respectively. These values are well below the estimated significant threshold of 14 tons per year (value obtained through personal communications with Dr. Noel Davis).

Potential entrainment impacts were fully addressed in the AFC application. As concluded in the analysis of adult equivalent losses, daily water intake volumes would have to approach the total yearly demand before any impact would be significant. Although, this was based on data from the 1980's it is unlikely that the order of magnitude change in ichthyoplankton abundance required to show a significant impact has occurred. However, as discussed in response to Data Request No. 1, we have implemented the analysis of the current ichythoplankton study at King Harbor as a demonstrated applicable data set for El Segundo generating station. Preliminary results will be supplied by April 25, 2001.

Note to the reader: The following biological resources Data Requests are supplemental to previous data requests.

Supplement to No. 6. As discussed at the March 28 workshop, the Applicant has agreed to meet with the CEC staff to discuss and agree upon an appropriate study protocol for entrainment analysis using icthyoplankton data gathered in the King Harbor area by the VanTuna Research Group.

Supplemental Response No. 6: A meeting was held on April 11, 2001 with CEC staff, CEC biological consultants, and the applicant's representatives for biological issues. At this meeting, it was agreed that the "adult equivalent loss" methodology would be suitable for the analysis. Other protocols, such as the "proportional losses" method, will also be applied as appropriate. An analysis of the King Harbor data is now underway. Preliminary results will be supplied by April 25, 2001, and the complete report will be submitted on or before June 1st.

Supplement to No. 7. As discussed at the March 28 workshop, the Applicant has agreed to provide additional information on impingement impacts.

Supplemental Response No. 7: Table 7s-1 relates the total number of individuals of the selected marine species (as listed by CEC consulting biologist Dr. Noel Davis in Data Request No. 1) impinged for the three once through cooling water systems in Santa Monica Bay to the commercial and sport take. Enron Long Beach District Energy Facility has been excluded for the reasons listed in data response CCC-17. This table clearly shows an insignificant impingement of these species when compared to commercial and sport harvest.

TABLE 7s-1
NUMBER OF INDIVIDUALS OF SELECTED SPECIES IMPINGED - 1997 – 1999

	Total Impingement (Norm. op & Heat Treatment) 1997-1999				Combined Total 1997-1999	Commercial[3] (lbs) Est. 1997-1999	Sport[4] Est. 1997-1999
Species (Latin Name)	**ESGS**	**Scattergood**	**Redondo**				
Atractoscion nobilis	36	212	2		250	740,613	34,536
Stereolepis gigas	1	1	0		2	0	0
Paralichthys californicus	7	83	9		99	3,981,699	27,855
*Panulirus interruptus**	130	431	2781		3342	1,467,762	0
Sebastes paucispinus	**No record of take at El Segundo.**						

[1] Species impinged during heat treatment.
[2] Extrapolated annual impingement during normal operations.
[3] 1999 State of California fresh water and commercial landings used to extrapolate for a three year period.
[4] 1999 Sport fishing take in the Southern California Bight used to extrapolate for a three year period. Numbers represent number of individuals per species taken. Does not include individual recreational take.
* Recorded in Biomass (lbs) for comparison to commercial take.

Total biomass of fish species impinged at ESGS, Scattergood, and Redondo for the years 1999, 1998, and 1997 are 3.5, 1.6, and1.7 tons, respectively. These values are well below the estimated significant threshold of 14 tons per year (value obtained through personal communications with Dr. Noel Davis).

Supplement to No. 8. As discussed at the March 28 workshop, the Applicant has agreed to provide additional discussion of cumulative impacts.

***Supplemental Response No. 8*:** Table 8s-1 relates the total number of individuals of the selected marine species (as listed by CEC consulting biologist Dr. Noel Davis in Data Request No. 1) impinged for the three once through cooling water systems in Santa Monica Bay to the commercial and sport take. Enron Long Beach District Energy Facility has been excluded for the reasons listed in data response CCC-17. This table clearly shows an insignificant impingement of these species when compared to commercial and sport harvest.

TABLE 8s-1
NUMBER OF INDIVIDUALS OF SELECTED SPECIES IMPINGED - 1997 – 1999

	Total Impingement (Norm. op & Heat Treatment) 1997-1999				Combined Total 1997-1999	Commercial[3] (lbs) Est. 1997-1999	Sport[4] Est. 1997-1999
Species (Latin Name)	**ESGS**	**Scattergood**	**Redondo**				
Atractoscion nobilis	36	212	2		250	740,613	34,536
Stereolepis gigas	1	1	0		2	0	0
Paralichthys californicus	7	83	9		99	3,981,699	27,855
*Panulirus interruptus**	130	431	2781		3342	1,467,762	0
Sebastes paucispinus	**No record of take at El Segundo.**						

[1] Species impinged during heat treatment.
[2] Extrapolated annual impingement during normal operations.
[3] 1999 State of California fresh water and commercial landings used to extrapolate for a three year period.
[4] 1999 Sport fishing take in the Southern California Bight used to extrapolate for a three year period. Numbers represent number of individuals per species taken. Does not include individual recreational take.
* Recorded in Biomass (lbs) for comparison to commercial take.

Total biomass of fish species impinged at ESGS, Scattergood, and Redondo for the years 1999, 1998, and 1997 are 3.5, 1.6, and1.7 tons, respectively. These values are well below the estimated significant threshold of 14 tons per year (value obtained through personal communications with Dr. Noel Davis).

Supplement to No. 9. As discussed at the March 28 workshop, the Applicant has agreed to provide additional discussion of Best Technology Available.

Supplemental Response No. 9: The Applicant has agreed to provide additional information on this issue; however, additional similar Data Requests have been received since the March 28 workshop. Therefore, this information will be provided as a part of the Applicant's responses to Data Requests 135 - 150, to be provided on or before April 27, 2001.

Supplement to No. 81. As discussed at the March 28 workshop, the Applicant has agreed to provide additional discussion of Best Technology Available.

Supplemental Response No. 81: The Applicant has agreed to provide additional information on this issue; however, additional similar Data Requests have been received since the March 28 workshop. Therefore, this information will be provided as a part of the Applicant's responses to Data Requests 135 - 150, to be provided on or before April 27, 2001.

Supplement to No. 84. As discussed at the March 28 workshop, the Applicant has agreed to provide additional discussion of Essential Fish Habitat.

Supplemental Response No. 84: An "Essential Fish Habitat" site has been identified for the steelhead (*Oncorhynchus mykiss*), a federally-listed endangered species, within Santa Monica Bay. This site is located at Malibu creek, 15 miles to the north of the project site. The steelhead is an anadromous fish that spawns in fresh water and spends its adult life at sea. Although there is no recent evidence of their occurrence in the Malibu creek their potential migration route would enter the Bay well to the north of the project area along the Santa Monica Bay submarine canyon and then turn north to the creek entrance. With the exception of entering and leaving Malibu Creek, steelhead are not found in shallow nearshore waters of Santa Monica Bay and have not been recorded in any of the three Santa Monica Bay Generating station impingement records. It is highly unlikely that the proposed project will have any effect on this habitat.

Note to the reader: The following data requests were received in a letter dated February 15, 2001 from Mr. Jim A. Bartel of the U.S. Fish and Wildlife Service, Carlsbad California office, addressed to Mr. Robert L. Therkelsen, Deputy Director, Energy Facilities Siting and Environmental Protection, California Energy Commission. These comments are paraphrased from the letter.

USFWS-1. The proposed alignment of the potable and reclaimed waterline route does not impact sensitive biological resources. However, the Alternate Water Line Study Area lies adjacent to habitat occupied by the endangered El Sequndo Blue Butterfly (*Euphilotes battoides allyni,* "butterfly") at the Chevron Preserve, as depicted in Figure 5.6-6. Any proposed alignment of the water line along Binder Place or West El Segundo Boulevard adjacent to the butterfly preserve would potentially impact the butterfly. Should an alternate alignment be necessary, we recommend avoidance of the area adjacent to the Chevron preserve.

Response No. USFWS-1: The Applicant is working closely with the City of El Segundo to identify a preferred routing for the water pipelines. At this time, it is improbable that the lines will be routed on El Segundo Boulevard west of the Chevron Preserve due to the naturally sloping terrain and residential land use in this area. In the unlikely event the City of El Segundo and West Basin Municipal Water District determine that the Alternate Water Line corridor adjacent to the Chevron Preserve is the

preferred route, standard construction mitigation measures will be implemented to ensure that there are no impacts to adjacent developed and undeveloped land uses. These mitigation measures typically include fenced work areas, dust control measures, and an expedited construction schedule. Thus, impacts to the Chevron Preserve habitat are unlikely, first because it is not considered a preferred route due to terrain and land use constraints, and second because all pipeline construction would be located in an existing paved roadway beyond the perimeter fence of the Chevron Preserve and standard construction mitigation measures would be implemented to eliminate potential indirect impact.

USFWS-2. We are also concerned about the resources that may still exist within the area delineated as the Kramer site, bordered by Rosecrans Avenue to the south, El Segundo Boulevard to the north, Sepulveda Boulevard to the west, and Aviation Boulevard to the east. This area is highlighted within Figure 5.6-10 as a potential staging and parking area. Depressional areas suitable for water retention, as depicted on the USGS 7 ½' Venice Quadrangle topographic map, may still be present in this area. Endangered species that have been documented from the region and that may persist in these depressions include Riverside fairy shrimp (*Streptocephalus woottoni*), California Orcutt grass (*Orcuttia californica*), San Diego button-celery (*Eryngium aristulatum* var. *parishii*), and coastal dunes milk vetch (*Astragalus tener* var. *titi*). An additional sensitive species know to utilize temporary pools in this area is the western spadefoot toad (*Scaphiopus hammondii*). Prior to any future consideration of this area as a staging or parking site, we recommend that biological surveys following U.S. Fish and Wildlife Service (Service) protocols be conducted for all potential threatened, endangered, and sensitive species that may occur onsite.

Response No. USFWS-2: Figure 5.6-7 in the project AFC provides an overview of biological resources in the vicinity of proposed parking and staging areas. Section 5.6.1.2 describes the biological characteristics of each offsite location, including the Kramer site. Biological surveys were conducted for the project AFC by URS Project Biologist, Ms. Anne Knowlton (refer to Appendix N for her resume). Additionally, Ms. Knowlton conducted a recent survey of the Kramer site with CEC staff representatives. The recent survey confirmed the description of the Kramer site as presented in Section 5.6.1.2 of the project AFC. In summary, the portion of the Kramer property that is proposed to be used for staging is limited to the existing fenced property that extends northeasterly from the foundry foundations. Nearly all of this 11.5-acre area is either paved or covered by existing concrete foundations. The unpaved portions are limited to less than 1 acre of either gravel surface, or previously graded dirt surface. In some cases, the gravel surface is

recolonized by non-native invasive species dominated by Bermuda grass (*Cynodon dactylon*) with approximately 10 percent vegetative cover. The previously graded dirt surface is also recolonized by non-native invasive species including Bermuda grass, Russian thistle (*Salsola tragus*), and iceplant (*Mesembryanthemum* sp.) with approximately 50 percent vegetative cover. Scattered, small patches of salt grass (*Distichlis spicata*) occur in the gravel or dirt surface at very low, insignificant densities.

Based on surveys conducted for the project AFC and during a recent site visit with CEC it is our opinion that further biological surveys would not provide meaningful information, and therefore would not be warranted.

USFWS-3. Finally, the staging area delineated as LAX-Pershing, proposed on the west end of Los Angeles International Airport east of Pershing Drive, is potentially occupied by Riverside fairy shrimp. The Service is currently in consultation with the Federal Aviation Administration and Los Angeles World Airports over proposed impacts to ephemeral wetlands and occupied Riverside fairy shrimp habitat adjacent to this proposed site. We recommend that this site be removed from further consideration as a staging area. Should this site remain a component of the proposed project, we recommend that biological surveys following Service protocols be conducted for all potential threatened, endangered, and sensitive species that may occur onsite.

Response No. USFWS-3: The LAX-Pershing site is an existing paved parking/staging area that is currently used by LAX for staging of vehicles and equipment. If this site is used for the ESPR project for equipment staging or worker parking, only the existing paved areas will be used, and no unpaved areas will be disturbed in any way. There are no native or ruderal habitats located within the perimeter of the LAX-Pershing site. Refer to Section 5.6.1.2 for a complete description of this parking/staging area.

Based on recent site visits by Ms. Anne Knowlton, a qualified biologist, it is our opinion that a biological survey would not provide meaningful information, and therefore would not be warranted.

TECHNICAL AREA: CULTURAL RESOURCES

SUMMARY OF CULTURAL DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, Cultural Resources Data requests have refined the information produced regarding potential cultural resources in the region and the means by which those resources might be impacted. Primarily, ESP II has very thoroughly evaluated the potential for Historic Resources in the City of El Segundo and taken steps to ensure the water supply pipelines will be routed through the alternative pipeline zone in a manner satisfactory to both the City of El Segundo and the CEC staff.

ESP II is confident that, with the addition of the data requests and responses provided below, ESPR can be approved in compliance with all applicable Laws, Ordinances, Regulations, and Standards, and with no significant impacts to Cultural Resources.

The following Data Requests have been received regarding Cultural Resources:

Data Request	Applicant's Response Date	Source of Data Request	Page
11	March 28	CEC	CUL-2
12	March 28	CEC	CUL-2
13	March 28	CEC	CUL-6
14	March 28	CEC	CUL-6
15	March 28	CEC	CUL-7
16	March 28	CEC	CUL-10
17	March 28	CEC	CUL-11
18	March 28	CEC	CUL-11
90	April 18	CEC	CUL-12
91	April 18	CEC	CUL-12
CCC-18	April 18	CCC	CUL-12
15s	April 18	CEC	CUL-13

TECHNICAL AREA: CULTURAL RESOURCES

AUTHOR: JEANETTE A. MCKENNA AND DOROTHY TORRES

BACKGROUND

A discussion of the Kramer Staging Area on page J-24 discusses the proposed staging area that is covered with asphalt over slag and debris from the former H. Kramer Company foundry. The discussion in the site record also addresses the asphalt covered slag heap as part of the site. It appears from the discussion in both references that this portion of the H. Kramer Company foundry site is within the project APE.

DATA REQUEST

11. Please explain why this area was not included as part of the site in the map identifying the site record. Please correct the site record map or explain why it is correct.

Response No. 11: The asphalt covered area located to the northeast of the foundations of the H. Kramer Company foundry was not included as part of the site in the location map provided with the primary record (Form DPR 523) due to the absence of evidence indicating the presence of cultural resources in the immediate area. The area in question is a parking lot completely sealed by an asphalt surface. Anecdotal reports have suggested that waste material from the foundry, or "slag," is located beneath this asphalt surface. In the field, there was no evidence to indicate (or any way to determine) whether cultural materials did, in fact, exist beneath the asphalt The only area exhibiting archaeological (ruined structural) features is the area containing the remnants of the foundry's concrete foundations. Thus, while it is possible that components of, or materials associated with the H. Kramer Foundry may exist beneath the asphalt surface of the proposed equipment staging area, the area was not illustrated as part of the site due to a lack of evidence in the field. A new site map of the Kramer site is provided as Attachment 4.

12. It appears that the Kramer Staging Area will sit on an asphalt-covered portion of the former H. Kramer Company foundry. Please discuss potential impacts to the site as a result of staging area location.

Response No. 12: No impacts to cultural resources are anticipated for the proposed Kramer Staging Area. Although it is possible that components of, or materials associated with the H. Kramer Foundry may exist beneath the asphalt surface of the proposed equipment staging area, any such

materials would not be impacted by the project. The proposed use of this area for temporary storage, parking, and staging of equipment, is consistent with the area's current and ongoing use as a parking lot. Any cultural materials located beneath the asphalt-capped surface of the proposed staging area would not be affected by the proposed temporary, surficial use of this paved area.

Supplemental Response to Data Requests #11 and 12 - Kramer Staging Area

Introduction

Based on ongoing project engineering evaluations, the ESPR project may require the use of a larger surface area at the "Kramer Staging Area" than previously planned. The asphalt-covered area located to the northeast of the foundations of the H. Kramer Company foundry may not provide sufficient space for equipment storage and staging. Thus, it is possible that the concrete foundations of the H. Kramer Company foundry, as well as open areas to the northeast of the asphalt-capped area and to the northeast, east, and southeast of the foundations may be required for equipment storage and staging.

Ms. Dorothy Torres of the California Energy Commission (CEC) and Mr. Alex Wesson of URS Corporation inspected the remnants of the Kramer foundry on March 14, 2001. Strategies for addressing the Applicant's proposed use of the entire property as a temporary equipment storage and staging area were discussed. At the suggestion of Mr. James Reede, CEC Project Manager for the ESPR Project, it was decided that a supplemental data response would be prepared by URS Corporation to address potential use of the foundry foundations and other areas on the Kramer property. It was agreed that this supplemental data response could be attached to the responses to the cultural resources Data Requests (11 and 12) concerning the proposed Kramer Staging Area.

Archaeological Survey

The entire subject area has been surveyed for cultural resources. The area was subjected to a pedestrian survey and cultural resources inventory by archaeologist Dr. Bryon Bass of URS Corporation on November 29, 2000. Dr. Bass observed scattered modern trash and debris, but no historic artifacts were noted. The concrete foundry foundations were recorded on Form DPR 523 (primary record). This

primary record was included in AFC Volume II, Appendix J (Technical Report for archaeological resources), as Attachment C.

Historic Background

In addition to the recordation of the foundations, Ms. Meta Bunse of JRP Historical Consulting Services conducted historic background research on the foundry and the H. Kramer Company. This research and appropriate recommendations were included in AFC Appendix K as Appendix K(4) Historic Background on the Kramer Staging Area. The foundations were recommended as ineligible for listing on the National Register of Historic Places. This recommendation was based on the unremarkable history of the H. Kramer Company, as well as the foundry's lack of structural integrity. The text from Appendix K(4) regarding the H. Kramer Company foundry is presented below:

Kramer Site

H. Kramer and Company operated a foundry at this location; however, none of the foundry buildings or any of its related facilities remain. The only visible remains of the foundry are the large building foundation and the asphalt-capped slag heap. According to the caretaker of the property, the H. Kramer Company built and operated a foundry on this site beginning in 1951. This is consistent with USGS mapping for the area that shows the site as vacant in 1950. By the time of the next edition of the topographic map (1964) a large building had been erected on the parcel. The building was razed sometime after 1981 and prior to 1995. This time frame is based on the last edition of USGS mapping of the area (1981) and a 1995 "Initial Study" filed with the El Segundo Planning Department submitted as part of a plan to erect a hot mix asphalt plant on the parcel. [1] This study included the following statements:

> *"The site was last occupied by an idle foundry that has been dismantled and removed. What remains is the various concrete and asphalt building foundations and paving built on differing grade levels."*

[1] James D. Meyer, Omnibus Environmental Services, "Initial Study, Applicant Questionnaire," January 1, 1995, City of El Segundo Planning Department; US Geological Survey, "Venice, Calif.," *7.5-Minute Series (Topographic)* 1950, 1964, 1964 photorevised 1972, and 1964 photorevised 1981 (Washington, D.C.: USGS).

"The site is devoid of any cultural, historical, or scenic aspects …" and "there are no cultural, historical, or scenic aspects to the surrounding properties."[2]

H. Kramer and Company is a brass and bronze refiner located in Chicago, Illinois, historically owned and operated by the Howard K. Chapman family. Mr. Chapman's grandfather founded the company and his father passed the legacy on to him. It is not clear if Howard K. Chapman Sr. or his father headed the company during the period that the firm operated the El Segundo plant. Mr. Chapman Sr. died on May 12, 1997 and his son, Howard K. Chapman, Jr., now serves as the Chief Executive Officer. There is no indication that the Chapmans, H. Kramer Company, or the El Segundo foundry were historically important within the context of the brass industry. Furthermore, there are no historic resources at the site that can be associated with these individuals or H. Kramer and Company. The Kramer site retains no historic integrity whatsoever, and does not appear to meet the criteria for listing on the National Register of Historic Places.[3]

Proposed Use

The Applicant's proposed use of the entire Kramer property as a temporary equipment storage and staging area would not require the modification or alteration of the ground surface, the asphalt-capped area, or the concrete foundations. The proposed use of the area involves the unloading of equipment and materials off trucks and rail cars on the railroad siding (located to the southeast of the property) and the temporary storage of such items. It is possible but unlikely that the concrete foundry foundations will be used; rather the open areas to the northeast, east, and southeast of the foundations may provide more suitable conditions. Equipment and materials will be placed atop wooden and/or concrete "timbers" for the purposes of keeping such items above any moisture on the ground and for ease of transporting the items with a forklift. The use of these "timbers" will also serve to ensure that no heavy equipment or materials will be stacked directly atop the foundations, should they be used.

[2] "Initial Study, Applicant Questionnaire," January 1, 1995, City of El Segundo Planning Department.
[3] "Howard K. Chapman," *Pennsylvania Gazette: University of Pennsylvania Alumni Magazine* (March 1998), www.upenn.edu/gazette; *Pacific Coast Industrial Directory* (Los Angeles: Bender Publications, 1973).

Conclusion

The proposed Kramer Staging Area has been surveyed for cultural resources. No historic artifacts were observed in association with the 1951 concrete foundations. The concrete foundations of the H. Kramer Company foundry have been recorded on a Primary Record (Form DPR 523). Based on historic background research on the H. Kramer Company, and on the lack of structural integrity at the foundry site, the foundations have been recommended by a project architectural historian as ineligible for listing in the National Register of Historic Places. The proposed use of the property will be limited to the temporary storage and staging of equipment and materials, and will in no way require the alteration or modification of the existing ground surface, asphalt-capped area, or concrete foundations. No impacts to cultural resources are anticipated for the proposed Kramer Staging Area.

BACKGROUND

The AFC identifies responses from several Native Americans who expressed concern about a potential for sites in the project area.

DATA REQUEST

13. Have there been any additional responses to the information letters sent to Native Americans by the applicant? Please provide copies of any responses that were sent in writing and summaries of responses that were by telephone.

Response No. 13: No additional responses or comments from Native American contacts regarding the ESPR Project have been received subsequent to the docketing of the AFC and Confidential Appendix J.

BACKGROUND

Appendix K, page 2 and several other sections of the AFC discuss the area of proposed alternate waterlines.

DATA REQUEST

14. Has there been a decision concerning the proposed alternate water line route? If an alternate route has been selected, please describe it and identify the route on a map at a scale comparable to Figure 3.2-2 in the AFC.

Response No. 14: At this time, a specific water line route has not been selected within the "zone of waterline alternatives." Based on the March 14 2001 workshop, the Applicant understands that the City of El Segundo staff will review the line route and indicate to CEC whether or not the City has a preference for one or more particular routes within the zone of waterline alternatives. The Applicant is prepared to work with the City on this issue, and to address other issues related to this Public Works project.

BACKGROUND

Appendix K provides a list of properties in the vicinity of the proposed and alternate water line route.

DATA REQUEST

15. Please provide site records (Form DPR 523) for all properties judged to be of either medium or high potential for eligibility to the national register.

Response No. 15: An evaluation of Historic Resources within the Proposed Project Area is in progress. Following is a summary of the report, "Sensitivity Analysis of Water Lines Associated with the El Segundo Generating Station Project, El Segundo, Los Angeles County, California," being prepared by JRP Historical Consulting services.

A survey of the proposed project area in El Segundo resulted in the evaluation of 40 historic properties (a property is defined here as a legal assessor's parcel, and may include more than one structure). The evaluations identified an historic district along Richmond Street, described below as Table 1, and then various other commercial and residential properties, described in Table 2. The City of El Segundo has also recognized this area as the "Richmond Street District" in their "El Segundo Downtown Specific Plan," which was approved on August 1, 2000[4]. This plan defines the Richmond Street District as "… the historic original Downtown," and further states that "standards for the district are intended to maintain, enhance, and preserve the historical "Old Town" character of the area, and Historic Design Standards are also established to ensure this goal[5.] This description is also consistent

[4] City of El Segundo, "El Segundo Downtown Specific Plan," Approved by City Council Ordinance No. 1319, adopted August 1, 2000, www.scag.org/homepages/el_segundo/.
[5] "El Segundo Downtown Specific Plan," part VI, section C, Richmond Street District.

with the definitions of a historic district according to the National Register of Historic Places, as well as the California Register of Historical Resources. Both of these programs recognize that a group, or concentration, of resources (in this case commercial buildings) that is linked historically or aesthetically should be considered as whole. For this reason, the 100 and 200 blocks of Richmond Street are being evaluated as a potential historic district.

It is important to note that no matter whether the buildings from 100 through 200 Richmond Street are called a "District," or an "Historic District," neither definition intends to include the streets themselves. The elements of value in the district are the buildings themselves, not the streets. *Assuming that the proposed water lines will be installed in city street rights of way*, this project would not affect the historic buildings on Richmond Street (under Federal rules this would be a finding of "no effect"; under state rules it would be a finding of "no substantial adverse change.") This is also true for resources that may be found to be eligible for the National Register elsewhere in the proposed project area. As long as the project does not involve the parcel of a potentially eligible resource, it does not have an effect on that resource.

Tables 1 and 2 can be summarized as follows:

Total properties evaluated: 40

Total properties eligible:	18 (16 as part of Richmond Street Historic District, 2 eligible separately)
Total properties not eligible:	22

A complete report, including site records (Form DPR 523) for all properties judged to be of either medium or high potential for eligibility to the national register, will be provided in the final report. This report is in progress and will be provided by April 18, 2001.

TABLE 15-1
RICHMOND STREET DISTRICT

Address		APN	Year Built	NRHP Status[6]
115-117	Richmond Street	4136-027-011	1925, 1922	3D
121	Richmond Street	4136-027-026	1956	6Z (Non-Contributing)
123-129	Richmond Street	4136-027-014	1921e	3D
131	Richmond Street	4136-027-015	1920	3D
135	Richmond Street	4136-027-017	1983	6Z (Non-Contributing)
139	Richmond Street	4136-027-018	1922	3D
140-142	Richmond Street	4136-026-002	1920, n.d.	3D
143	Richmond Street	4136-027-019	1922	3D
145	Richmond Street	4136-027-020	1928	3D
144-146	Richmond Street	4136-026-001	1924	3D
147	Richmond Street	4136-027-021	1923	6Z (Non-Contributing)
203	Richmond Street	4136-024-017	1923	3D
211-213	Richmond Street	4136-024-010	1923	3D
215	Richmond Street	4136-024-011	1925	6Z (Non-Contributing)
216-220	Richmond Street	4136-025-004	1942, 1915, 1919	3D
221	Richmond Street	4136-024-012	1926	3D
222	Richmond Street	4136-025-003	1947	3D
223	Richmond Street	4136-024-013	1922	3D
225	Richmond Street	4136-024-014	1922	3D
209	Richmond Street	4136-024-008	1918	3D
Number of Properties: 20			**Not Eligible for District: 4**	
			Eligible for District: 16	

[6] NRHP Status Codes as defined by California Office of Historic Preservation (OHP). Code 3D is a "contributor to a district that has been fully documented according to OHP instructions and appears eligible for listing." Code 3S is a property that "appears eligible for separate listing." Code 6Z is a property that has been found ineligible for listing in the National Register by a process other than a determination by OHP or the Keeper of the National Register (in this case an evaluation by historians who meet the Secretary of the Interior's standards).

TABLE 15-2
OTHER ADDRESSES EVALUATED

Address		APN	Year Built	NRHP Status[9]
135-139	Concord Street	4136-028-024	1926, 1957	6Z
147	Concord Street	4136-028-021	1919	6Z
210	Concord Street	4136-024-006	1911	6Z
221	Concord Street	4136-023-013	1923	3S
224, 226A-B	Concord Street	4136-024-002	1916, 1918	3S
216	Franklin Street	4136-027-002	1920	6Z
527	Franklin Street	4136-021-007	1926	6Z
420-424 1/2	Franklin Street	4136-029-001	1948, 1952, 1953	6Z
301-307	Main Street	4136-016-020	1926e	6Z
205	Loma Vista Street	4131-012-007	1923, 1962	6Z
213	Loma Vista Street	4131-012-005	1930, 1935	6Z
215-217	Loma Vista Street	4131-012-004	1920, 1924, n.d.	6Z
219	Virginia Street	4136-022-014	1953-1954	6Z
223	Virginia Street	4136-022-015	1952-1953	6Z
225	Virginia Street	4136-022-016	1951	6Z
201-217	W. Grand Avenue	4136-017-043	1920, 1926	6Z
202	Whiting Street	4136-022-008	1913	6Z
210	Whiting Street	4136-022-006	1939	6Z
225	Whiting Street	4136-021-016	1921	6Z
229	Whiting Street	4136-021-017	1914, 1919, 1927	6Z
Number of Properties: 20			**Eligible: 2**	
			Not Eligible: 18	

BACKGROUND

Appendix K identifies several areas that might be used for laydown or parking that do not appear to be under consideration in the cultural confidential appendix and other parts of the AFC.

DATA REQUEST

16. Please list all areas that may be used as parking and/or construction staging areas.

Response No. 16: Please refer to the Introduction to Appendix K, which contains the following notation: "Please note that K(2) contains references to project

components which have been subsequently dropped from the ESPR Project. These are: LAX Sandpiper Staging Area, Marina Del Rey Library Parking Area, and Playa Del Rey/62nd Street Parking Area." The LAX Imperial Staging Areas was also dropped subsequent to the production of Appendix K.

The areas that may be used as parking and/or construction staging areas are:

- Area 1 – Kramer Staging Area
- Area 2 – Federal Express Staging/Parking Area
- Area 3 – LAX Pershing Staging/Parking Area
- Area 4 – Marina Del Rey Boat Launch Parking Area
- Area 5 – Dockweiler State Beach Parking Area
- Area 6 – Hyperion Parking Area
- Area 7 – Grand Avenue Parking Area
- Area 8 – Chevron Marine Terminal Staging Area.

BACKGROUND

Staff needs to identify all areas of potential ground disturbance.

DATA REQUEST

17. Please describe the locations of any access roads or additional ground disturbance and add these locations to Figure J-2 provided in the confidential cultural appendix.

Response No. 17: No access roads or additional ground disturbance have been added to the project subsequent to the docketing of the AFC and Appendix J.

BACKGROUND

Page 3.7-1 of the AFC indicates that the reclaimed water line and the potable water line will be enclosed in the same trench.

DATA REQUEST

18. What is the anticipated depth and width of the trench in feet?

Response No. 18: The trench dimensions will determined by the City of El Segundo Department of Public Works once the precise route has been determined and approved, as discussed in response to Data Request 14, above.

BACKGROUND

The applicant has identified a "zone of water line alternatives" and requested input from the City of El Segundo and Commission staff. It appears from recent data responses that most of the potential historic resources within the "zone" are located on Richmond and Concord Streets.

DATA REQUEST

90. Please address the feasibility of using El Segundo St. as a portion of the water line route.

Response No. 90: At the March 28 public workshop, the City of El Segundo Planning staff indicated that they are presently evaluating potential pipeline routes and that they will select a preferred route with consideration of potential resource constraints within the zone of alternative routes. We understand the City is presently coordinating with West Basin Municipal Water District to jointly evaluate and determine a preferred route. We will continue to work closely with these agencies and the CEC to address potential construction related impacts along the pipeline route. We anticipate that a preferred route will be determined prior to April 27; we will report final resolution of this question as soon as information becomes available.

91. Please provide a map of the "zone of water line alternatives" that identifies potential water line routes that are designed to avoid Richmond and Concord Streets.

Response No. 91: Please refer to our response to Data Request 90, above, for a status of the pipeline route. A map of the route will be provided as soon as a final route (or set of alternative routes) is determined.

CCC-18. The AFC received by the CCC was missing the Cultural Resources Section. Please forward this section to the CCC as soon as possible to facilitate CCC review.

Response No. CCC-18: AFC Section 5.7, Cultural Resources, was forwarded separately to Mr. Tom Luster of the Coastal Commission staff on April 13, 2001.

Supplement to No. 15. Please provide the final copy of the Historic Resources Analysis for the pipeline area, including Form DPR 523 Records.

Supplemental Response No. 15: Two copies of the report *"Form 523 Records – Buildings Near the Proposed Water Mains for the El Segundo Power Redevelopment Project, El Segundo, California"* were provided to CEC's Ms. Dorothy Torres on April 13, 2001. A separate copy was forwarded to Mr. Paul Garry at the City of El Segundo Community Economic and Development Services Department on April 16. An additional five copies will be docketed as reference documents concurrent with the data response filing on April 18, 2001.

TECHNICAL AREA: CUMULATIVE IMPACTS

SUMMARY OF CUMULATIVE DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, several data requests have provided other projects which have been incorporated into cumulative impacts analysis. ESP II continues to evaluate ESPR to have no unmitigated cumulative significant impacts.

The following Data Requests have been received regarding Cumulative Impacts:

Data Request	Applicant's Response Date	Source of Data Request	Page
77	March 28	COES	CUM-2
77s	April 18	COES	CUM-5

TECHNICAL AREA: CUMULATIVE IMPACTS
AUTHOR: CITY OF EL SEGUNDO

77. In the Cumulative Impacts Section of the AFC, the list of cumulative projects in El Segundo should be revised to include additional projects (i.e., LAX Master Plan) that would be completed after the year 2002, since it seem likely that the proposed project would be not be approved by the California Energy Commission until late 2001 with a 20 month construction period (page 5.20-3). The plant would not be operational until 2003 or 2004. Attached is the current El Segundo approved project list.

Response No. 77: Refer to Section 5.21.2.1, Los Angeles Airport Master Plan EIR/EIS within the AFC for a discussion of the LAX Master Plan Project. The AFC states:

"The Master Plan for LAX proposes to change runways, passenger terminals, roadways, cargo and other facilities. A Draft Environmental Impact Statement/Environmental Impact Report (DEIS/EIR) is being prepared for the Master Plan Project and is a joint effort between the Federal Aviation Administration and the City of Los Angeles. The project would also include the following transportation improvement projects in the vicinity of the airport:

- State Route 1: realignment of SR 1, north of LAX between Sepulveda Boulevard and Lincoln Boulevard

- LAX Expressway: construction of an expressway along side of I-405.

Construction of the project would be phased (depending on the approved build alternative) and would begin immediately upon approval of the project and conclude in 2015. The Master Plan EIR/EIS is currently being prepared and is anticipated to be released for public review within the next 6 months. If the LAX project is approved by the end of 2001, construction could begin by early 2002 and could potentially overlap with the ESPR project; however, given the magnitude and controversial nature of the LAX project, the schedule for completion of the EIR/EIS, and subsequent construction activities is considered speculative. Thus, there are no reasonably foreseeable cumulative impacts associated with this project."

At the time of preparation of the AFC, the most recent "Major Approved and Active Projects (Short Build-Out List – Completion by September 2002)" dated September 26, 2000 provided by the City of El

Segundo was used in the preparation of the Cumulative Impact Section. Table 5.20-1 has been revised to include the following projects presented in the "Major Approved & Active Projects – December 2000" list provided by the City of El Segundo. This revised table is included as Attachment 6.

- **EA# 102, 951 – 1961 El Segundo Boulevard, Xerox Phase IV**

The project consists of the development of a 255,242 square feet (350 Room) office hotel. A development agreement exists for the project and expires in March 1, 2003. A construction schedule is not yet available. Since there are no construction schedules or plans to consider for a cumulative impact analysis, it is not feasible to assess the cumulative significance of the project with the construction or operation of the proposed plant. Even if the construction schedules of the two projects were to overlap, impacts would not be considered significant due to the geographical locations of the two projects.

- **EA#32312, 445 and 475 Continental Mallel**

The project consists of the development of 300,00 square feet research and development building. A development agreement exists for the project and expires September 7, 2001. A construction schedule is not yet available. Since there are no construction schedules or plans to consider for a cumulative impact analysis, it is not feasible to assess the cumulative significance of the project with the construction or operation of the proposed plant. Even if the construction schedules of the two projects were to overlap, impacts would not be considered significant due to the geographical locations of the two projects.

- **EA# 286 439 480, 1415 E. Grand Avenue**

The project consists of the development of a 28 unit-townhome complex. The subdivision expires May 4, 2001. A construction schedule is not yet available. Since there are no construction schedules or plans to consider for a cumulative impact analysis, it is not feasible to assess the cumulative significance of the project with the construction or operation of the proposed plant.

- **EA # 537 700 N. Nash, 800 N. Nash, El Segundo Media Center**

The project consists of the development of a 630,000 square foot Office; 220,000 square foot Hotel/Retail; 377,000 square foot Technology Campus; and 273,000 square foot Media Campus. Currently an EIR is required and is pending approval from the City. A construction schedule is not yet available. Since there are no construction schedules or plans to consider for a cumulative impact analysis, it is not feasible to assess the cumulative significance of the project with the construction or operation of the proposed plant. Even if the construction schedules of the two projects were to overlap, impacts would not be considered significant due to the geographical locations of the two projects.

- **EA # 427 470 Northwest Corner of Aviation and Rosecrans**

The project consists of the development of a 350-unit mini-storage facility. Currently the project is under construction and is expected to be completed before the construction of the ESPR Project. No cumulative impacts are anticipated.

- **EA # 522 2260 E. El Segundo Boulevard**

The project consists of the development of a 98,000 square foot Data Center. Currently the project is under construction and is expected to be completed before the construction of the ESPR Project. No cumulative impacts are anticipated.

- **EA # 535 888 N. Sepulveda**

The project consists of the development of a 120,610 square foot Office or Hotel and Airport Parking. Currently the project is pending approval from the City. A construction schedule is not yet available. Since there are no construction schedules or plans to consider for a cumulative impact analysis, it is not feasible to assess the cumulative significance of the project with the construction or operation of the proposed plant. Even if the construction schedules of the two projects were to overlap, impacts would not be considered significant due to the geographical locations of the two projects.

Supplement to No. 77. Supplement the Traffic and Transportation analysis to include traffic analysis of cumulative projects list provided by City of El Segundo. Also include projects from City of Manhattan Beach.

Supplemental Response No. 77: Cumulative projects identified by the Cities of El Segundo and Manhattan Beach are addressed in Section 5.20 of the AFC. A supplemental letter submitted by the City of Manhattan Beach, dated January 19, 2001, identified three additional projects: 1) widening of Aviation Boulevard; 2) development of a 52-room hotel at 1800 Sepulveda Boulevard; and 3) development of new facilities at the City Civic Center.

Potential cumulative impacts of the ESPR Project with these three projects are considered to be insignificant, based on the following:

1) Aviation Blvd Widening: ESPR construction traffic would not be expected to use this portion of Aviation Boulevard, south to Marine Avenue in the City of Manhattan Beach. Construction traffic along Aviation Boulevard would only be anticipated to use that portion of the road in the City of El Segundo, as needed to access temporary construction parking at the FedEx facility, if that location is used for offsite parking or staging.

2) 1800 Sepulveda/52-room Hotel: This project is currently under construction. Traffic impacts would not be an issue since project construction would not overlap with that of the ESPR Project.

3) Civic Center Development: This project would demolish the existing police and fire facilities, and construct a new combined public safety facility, library expansion, and cultural arts center, for a net increase of over 54,000 s.f. of development. An additional 90,000 s.f. of commercial, retail, and 40-room bed-and-breakfast also would be constructed. Potential cumulative impacts with the ESPR Project are unlikely, given that the location of the project at the Manhattan Beach Civic Center would likely use other construction routes (e.g., Valley and Manhattan Beach Boulevards), rather than those used for the ESPR Project (e.g., Vista Del Mar, Imperial Highway).

TECHNICAL AREA: EFFICIENCY

SUMMARY OF EFFICIENCY DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, a data request has asked ESP II to provide a missing Figure. ESP II provided that figure. ESP II continues to evaluate ESPR to comply with all applicable Laws, Ordinances, Regulations, and Standards, and to have no unmitigated significant impacts.

The following Data Requests have been received regarding Efficiency:

Data Request	Applicant's Response Date	Source of Data Request	Page
19	March 28	CEC	EFF-2

TECHNICAL AREA: EFFICIENCY
AUTHOR: STEVE BAKER

BACKGROUND

Section 5.19.7 of the AFC addresses off-design efficiency of the power plant, and refers to Figure 5.19-1.

DATA REQUEST

19. Figure 5.19-1 was missing from the AFC. Please provide it.

Response No. 19: Figure 5.19-1 is included in the AFC as Figure 3.4-1, and is provided in this document as Attachment 7.

TECHNICAL AREA: GEOLOGY AND PALEONTOLOGY

SUMMARY OF GEOLOGY DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, data requests have been issued by several agencies asking for clarification on certain potential geological hazard issues. In several cases nearly identical data requests have been issued by multiple agencies. As such, where appropriate, ESP II has coordinated the response to the similar data requests.

A particular issue that has arisen has concerned shoreline erosion and the potential relationship of that erosion to the rock groin extending into the ocean North of the ESGS site. ESP II believes that the investigation of the causes of that erosion are more appropriate in other forums, such as before the California Coastal Commission. The potential hazards of that erosion are of course an appropriate issue for ESPR. ESP II has committed to performing whatever mitigation is necessary in the future to preserve the geological integrity of the ESGS site. Indeed, as owners of the existing ESGS, the owners of ESP II have a significant interest in such geological integrity regardless of the outcome of ESPR.

The data responses below, submitted by ESP II provide continuing assurances that ESPR can be approved to comply with all applicable Laws, Ordinances, Regulations, and Standards, and to have no unmitigated significant impacts.

The following Data Requests have been received regarding Geology and Paleontology:

Data Request	Applicant's Response Date	Source of Data Request	Page
20	March 28	CEC	GEO-2
21	March 28	CEC	GEO-3
22	March 28	CEC	GEO-3
23	March 28	CEC	GEO-4
24	March 28	CEC	GEO-6
25	March 28	CEC	GEO-7
CCC-11 (CCC-6)	April 18	CCC	GEO-7
CCC-12 (CCC-7)	April 18	CCC	GEO-8
CCC-13	April 18	CCC	GEO-9
CCC-14	April 18	CCC	GEO-9
CCC-15	April 18	CCC	GEO-9

TECHNICAL AREA: GEOLOGY AND PALEONTOLOGY
AUTHOR: ROBERT ANDERSON

BACKGROUND

The project area is in the region that was affected by strong ground shaking from the March 10, 1933 Long Beach earthquake. Areas of liquefied soils were reported in the region after the earthquake. Page G-9 of the AFC indicates that the site area is not known to have experienced liquefaction during historic earthquakes. However, no information regarding liquefaction reported in the region after the Long Beach earthquake is mentioned.

DATA REQUEST

20. Please identify if liquefaction was reported along the existing and proposed linear facilities and the project site after the 1933 Long Beach earthquake.

Response No. 20: In CDMG Special Report 114 "A Review of the Geology and Earthquake History of the Newport-Inglewood Structural Zone, Southern California", 1974, Barrows summarizes the characteristics of the Long Beach Earthquake including a section on surface effects. He does not describe any liquefaction related occurrences near the El Segundo area. Evidence of liquefaction (and/or possible settlement) is described for the Seal Beach, Huntington Beach and Huntington Harbor areas, Compton, and Long Beach. This includes numerous areas along the coast highway where it was been constructed over an old tidal slough or estuary. Additional discussions regarding liquefaction events in the Los Angeles area are presented in Ziony and others (1985) including liquefaction events following the 1857 Fort Tejon earthquake, the 1973 Point Mugu earthquake, and the 1971 San Fernando earthquake. None of these events triggered liquefaction in the El Segundo area.

BACKGROUND

The Southern California Earthquake Center (SCEC) recently released a report entitled "Accounting for Site Effects in Probabilistic Seismic Hazards Analyses of Southern California" (The SCEC Phase III Report) which is published in the *Bulletin of the Seismological Society of America*, volume 90, No. 6B, (December 2000).

DATA REQUEST

21. Please indicate if the material presented in the SCEC Phase III report will have an effect on the estimated strong ground motion determined for the project and the linear facilities.

Response No. 21: The SCEC Phase III report is a recent compilation of research data and numerical modeling results that indicate the relative importance of proper characterization of site subsurface conditions within and near the Los Angeles basin. The report is sufficiently detailed in the realm of applied geophysics with respect to basin effects but does not necessarily provide a clear set of guidelines for direct implementation of its use.

Nevertheless, based on the research presented therein (Wills, et. al.), it is strongly suggested that the average shear-wave velocity to a depth of 30m (V_s^{30}) is a good indicator of potential site ground motion response as facilitated by the 1997 Uniform Building Code (UBC) Soil Profile Type methodology. In this respect, the authors have prepared a near-surface shear wave velocity map of the Los Angeles basin that places the El Segundo project site in an area that may be categorized as either D or CD. These generally correspond to UBC Soil Profile Types of S_d to borderline S_c/S_d, respectively. Likewise, the authors suggest that sites underlain primarily by dune sand deposits be placed in category D.

Our original assumption of a UBC Soil Profile Type of S_d appears to be a solid and justifiable assumption. It is not likely that the results of pending field explorations and laboratory testing will suggest that the site should be assumed stiffer than S_d conditions.

In summary, it is felt that the seismic design provisions of the 1997 UBC assuming a Soil Profile Type of S_d will be suitable for project design.

22. If the material presented in the SCEC Phase III Report causes the ground motion to change, please provide a brief explanation how the material from the SCEC Phase III Report affected the initial strong ground motion determination.

Response No. 22: Please see response to Data Request No. 21 (above).

BACKGROUND

Pages G-10 and G-11 of the AFC indicates that artificial fill will replace the upper five to twenty feet of soil at the project site.

DATA REQUEST

23. Please highlight the cut and fill areas on the grading and drainage plans. If the excavation is to extend below the ground water table, please indicate how excavation and fill placement below the ground water table would be accomplished.

Response No. 23: Final site grades for the project will be very near those that already exist at the site. No new significant cut or fills are planned for the project. Hence, final site grades will be on the order of elevation +19 to +20 feet MSL with paved surface inclinations of about 1 percent. Drainage collection and discharge will be provided using appropriate Best Management Practices (BMPs).

The project design team is currently working on demolition and site preparation plans that will take into account the need for site excavation, groundwater dewatering, earthwork, ground improvement (if needed), and planned construction. The means and methods of these activities will be provided therein. However, in general, the shallow groundwater will be lowered to an appropriate level using a series of deep wells surrounding the excavation perimeter. Handling of the extracted groundwater will be performed in strict accordance with regional permit requirements. Fill soils will be properly placed and compacted in the excavation prior to shutting off of the dewatering system wells.

The El Segundo Power Redevelopment Project (ESPR) involves the construction of new combined cycle facilities within the limits of the existing Units 1 and 2 at El Segundo Generating Station (ESGS). Existing foundations and piping within the limits of these two units will need to be demolished to make room for the new foundations for the proposed structures of the new plant along with new circulating water piping.

Finish grade elevation for ESPR is Elevation 20.0 feet (MLLW), the same as for the existing plant site. It is anticipated that all existing foundations and circulating water pipe within the footprint of the proposed power block, which are above Elevation 10.0 feet (MLLW), will be removed by the demolition contractor. To make this possible, an

open excavation with slopes at 1.5H:1V is anticipated around the footprint of the proposed new power block, as shown in Attachment 8 to this Data Response package. Groundwater control is not expected to be required for this excavation, because groundwater at the site is at Elevation 8.0 feet (MLLW).

Once all existing foundations and circulating water piping above Elevation 10.0 feet (MLLW) have been removed from within the power block area, the demolition contractor will remove existing foundations below Elevation 10.0 feet (MLLW) within the limits of the new major equipment foundations or new circulating water pipe. New equipment foundations include the foundations for the steam turbine generator (STG), combustion turbine generators (CTGs), and heat recovery steam generators (HRSGs).

The final invert elevation of the new circulating water pipeline will not be determined until detailed design by the EPC contractor. It is likely that all existing foundations along the proposed circulating water pipe route will need to be removed to allow adequate space for trench excavation and pipe placement.

Based on the results of the previous soil investigations performed for Units 1 through 4 at the ESGS site, the potential for liquefaction at the site has been classified as low to moderate. New subsurface investigations associated with the ESPR project will be performed to define the potential for liquefaction. If the potential for liquefaction is determined to be a significant problem, ground improvement will become necessary.

If ground improvements are required within the limits of balance of plant equipment as well as major equipment foundations, the scope of the demolition work would increase to cover removal of additional existing foundations below Elevation 10.0 feet (MLLW).

Groundwater control would be required at excavations for the removal of foundations and piping below the groundwater level. A groundwater control system will be installed as appropriate for the removal of the foundations below Elevation 8.0 feet (MLLW). The groundwater control system of choice will be put in place around the footprint of the proposed excavations.

Water discharge from the dewatering system may be treated onsite and discharged to the ocean or may be pumped into containers and disposed of off site. If it is determined that dewatering of the excavations may

cause excessive settlement of structures, a groundwater barrier may be put in place. This barrier would extend from the ground surface to the clay layer found at about Elevation –30 feet (MLLW).

Once drawdown is achieved, excavation and removal of the structures would follow. Each excavation would encompass as much foundation demolition as possible with side slopes of 1.5H:1V. If it would become necessary to keep dewatering to a minimum, barrier wall excavation support may be needed to limit the excavation area and dewatering.

Any excavation below Elevation 10.0 ft (MLLW) performed to remove an existing foundation or pipe will be backfilled to Elevation 10.0 ft (MLLW) with controlled fill. The demolition contractor will leave the excavation at the end of the demolition work at Elevation 10.0 ft (MLLW), and this elevation will serve as the construction platform from which the EPC contractor will begin construction of the new facilities.

Staging of excavation and groundwater control will minimize the volumes of water to be handled at one time.

BACKGROUND

The location of oil wells and former sand and gravel works is not clearly identified on AFC figure 5.3-2.

DATA REQUEST

24. Please highlight the location of oil and gas wells and sand and gravel works on figure 5.3-2 of the AFC. If no oil or gas wells or sand and gravel works show up on the figure then clearly state so on the figure.

Response No. 24: A revised Figure 5.3-2 with the requested information is provided as Attachment 9.

BACKGROUND

The beach sand near the southwestern boundary of the site appears to have washed away so that the width of the beach is less than the width of the beach near the northwestern corner of the site. This may be due to interference in sand movement along the coast by the rock groin northwest of the site.

DATA REQUEST

25. Please identify the parties responsible for maintaining the beach and submit a copy of their erosion control plan for the beach south of the rock groin.

Response No. 25: The County of Los Angeles Department of Beaches and Harbors is responsible for maintaining the beach south of the rock groin. A copy of the Erosion Control Plan and related documentation is provided as Attachment 10.

CCC-11. 5.3.1.1.7.4 Slope Stability: The AFC identifies this as a significant geologic hazard at the project site. The applicant should provide additional information on preferred responses to slope instability and the impacts of these responses on coastal resources or on elements of the local coastal plan.

Response No. CCC-11: Slope stability is a potential design issue in one area of the existing plant property – namely, the existing slope between the retaining wall at the eastern edge of the plant pavement, and Vista del Mar Boulevard. At this time, slope stability is not considered a problem on this slope. Prior to construction of ESPR, detail design work will be conducted to determine whether slope stabilization measures are needed to ensure continued stability of this slope. Detail design work will include geotechnical investigations in the sloped area. The results of these investigations will determine whether additional slope stabilization is warranted, and include an analysis and recommendation for specific slope stabilization measures, as appropriate. Specific slope stabilization measures could include:

- Slope regrading
- Construction of a new retaining wall
- Soil nailing
- Other slope anchorage systems

If slope stabilization measures are recommended as a part of the final design effort, then the recommended measures will be developed with consideration of potential impacts to coastal resources, with specific emphasis on avoiding soil erosion, maintaining an appropriate vegetative cover, and maintaining or enhancing the visual/aesthetic character of the existing slope. Short-term construction-related impacts of potential slope stabilization measures will also be considered, with special emphasis on minimizing temporary traffic safety impacts on Vista del Mar Boulevard.

CCC-12. 5.3.1.1.7.7 Coastal Conditions: The AFC states that erosion due to coastal processes is possibly significant, and identifies erosion as an ongoing problem at and adjacent to the site. The applicant should provide additional information on the rate of shoreline erosion in the project area and a description of erosion associated with particular storms or events. Information should also be provided on any past or ongoing measures taken to address erosion, any applicable monitoring data, and specific proposed measures to further address the issue. This should include any data available on the existing rock groin and revetment, including ongoing maintenance needs of these structures or proposals to modify or expand them.

Response No. CCC-12: There are no plans to add sand or modify the existing rock revetment in any way. The present and future surface elevation at ESPR is about 20 feet above mean sea level (MSL). Shoreline protection of the ESPR facilities from adverse coastal conditions will be provided by retaining the existing coastal structures and by improving the existing perimeter wall, as shown on Figure 3.4-2A. As described in Section 3.5.10 of the AFC, the existing ten-feet high masonry wall on the western edge of the site, west of units 3 and 4, will be extended north and south. The height of this new wall will be approximately 10 feet. The final top-of-wall elevation will be on the order of +30 feet MSL.

If the beach continues to erode, seawater will encounter the existing rock revetment, as it has during isolated events in the past.

There are no plans to add sand or modify the existing rock revetment in any way. Based on discussion during the March 28 workshop, the Applicant understands that CEC staff is coordinating with Coastal Commission staff to investigate coastal conditions that have been encountered since installation of the nearby rock groin in the mid-1980s. Pending the outcome of this investigation, the Applicant is prepared to participate in further discussions of coastal erosion related the ESPR Project.

Detailed design studies will include evaluation of historical and potential future wave runup, overtopping, and landward erosion rates along the adjacent shoreline. Additional subsurface explorations and laboratory testing may not be necessary. However, baseline beach profiles extending several hundred feet offshore at regular intervals both north and south of the groin may be performed. The evaluations will also include interaction with local and State agencies. Shoreline erosion mitigation alternative, if necessary, could include direct placement of "beach quality" nourishment fill in accordance with accepted methods of the US Army Corps of Engineers, California

Coastal Commission, County of Los Angeles, City of El Segundo and other permitting agencies. Placement of additional rock to enhance the existing revetment is not a preferred alternative unless severe shoreline erosion occurs.

CCC-13. 5.3.3 Stipulated Conditions: We concur with the applicant's Stipulated Conditions, with a requested change in GEO-2 and GEO-3 that a copy of the liquefaction analysis and the Engineering Geology Report is provided for Coastal Commission review.

Response No. CCC-13: The Applicant agrees to amend Stipulated Conditions GEO-2 and GEO-3 to stipulate that a copy of the liquefaction analysis and the Engineering Geology Report will be provided for Coastal Commission review.

CCC-14. 5.3.4.3 Flooding: The AFC describes a perimeter containment wall on the west side of the facility to reduce flooding. Additional information should be provided on proposed changes to this wall, especially as they might affect coastal resources or elements of the local coastal plan.

Response No. CCC-14: As described in Section 3.5.10 of the AFC, the existing 11-feet high masonry wall on the western edge of the site, west of units 3 and 4, will be extended north and south. The height of this new wall will be between approximately 10 feet. The final top-of-wall elevation will be on the order of +30 feet MSL.

CCC-15. 5.3.4.5 Slope Stability, 5.3.4.6 Liquefaction, and 5.3.4.7 Shoreline Erosion: These sections each refer to various options available to address the associated concern, but the applicant has not stated which, if any, will be included as part of the proposed project. Additional information should be provided about preferred measures to address each issue, and how the preferred measures might affect coastal resources or elements of the local coastal plan.

Response No. CCC-15: Additional information on the preferred mitigation measures to improve slope stability, liquefaction, and erosion will be selected during detailed design.

Slope Stability

As discussed in response to Data Request 11, above, and in Section 3.3.2.4 of the AFC, slope stability is a potential design issue in one area of the existing plant property – namely, the existing slope between the retaining wall at the eastern edge of the plant pavement, and Vista del Mar Boulevard. At this time, slope stability is not considered a problem

on this slope. Prior to construction of ESPR, detail design work will be conducted to determine whether slope stabilization measures are needed to ensure continued stability of this slope. Detail design work will include geotechnical investigations in the sloped area. The results of these investigations will determine whether additional slope stabilization is warranted, and include an analysis and recommendation for specific slope stabilization measures, as appropriate. Specific slope stabilization measures could include:

- Slope regrading
- Construction of a new retaining wall
- Soil nailing
- Other slope anchorage systems

Additional discussion of these options is provided in Sections 3.3.2.4 and 5.3 of the AFC.

If slope stabilization measures are recommended as a part of the final design effort, then the recommended measures will be developed with consideration of potential impacts to coastal resources, with specific emphasis on avoiding soil erosion, maintaining an appropriate vegetative cover, and maintaining or enhancing the visual/aesthetic character of the existing slope. Short-term construction-related impacts of potential slope stabilization measures will also be considered, with special emphasis on minimizing temporary traffic safety impacts on Vista del Mar Boulevard.

Liquefaction

Appropriate ground improvement methods will be determined based on geotechnical analyses to be conducted as a part of the pre-construction detail design work. If liquefaction is identified as a potential problem, then a variety of potential ground improvement methods will be evaluated, including:

- Stone columns
- Compaction grouting
- Jet grouting
- Micro-fine grouting
- Vibro-Concrete columns
- Chemical grouting
- Remedial earthwork
- Deep foundations.

Additional discussion of these options is provided in Sections 3.3.2.3 and 5.3 of the AFC.

Shoreline Erosion

As discussed in response to Data Request 12, above, there are no plans to add sand or modify the existing rock revetment in any way. The present and future surface elevation at ESPR is about 20 feet above mean sea level. Shoreline protection of the ESPR facilities from adverse coastal conditions will be provided by retaining the existing coastal structures and by improving the existing perimeter wall, as shown on Figure 3.4-2A. As described in Section 3.5.10 of the AFC, the existing 11-feet high masonry wall on the western edge of the site, west of units 3 and 4, will be extended north and south. The height of this new wall will be between approximately 10 feet. The final top-of-wall elevation will be on the order of +30 feet MSL.

If the beach continues to erode, seawater will encounter the existing rock revetment, as it has during isolated events in the past.

Based on discussion at the March 28 public workshop, the Applicant understands that CEC staff is coordinating with Coastal Commission staff to investigate coastal conditions that have been encountered since installation of the nearby rock groin in the mid-1980s. Pending the outcome of this investigation, the Applicant is prepared to participate in further discussions of coastal erosion as it relate to the ESPR Project.

TECHNICAL AREA: HAZARDOUS MATERIAL HANDLING

SUMMARY OF HAZARDOUS MATERIALS DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, several data requests have been issued on various hazardous materials topics. Two of these data requests call for Offsite Consequences Analyses (OCA) which are being conducted. These OCA's will be provided by April 27, 2001. The other data requests have been fully answered and are presented below. ESP II continues to believe that ESPR complies with all applicable Laws, Ordinances, Regulations, and Standards, and has no unmitigated significant hazardous materials impacts.

The following Data Requests have been received regarding Hazardous Material Handling:

Data Request	Applicant's Response Date	Source of Data Request	Page
70	March 28	COES	HMH-2
71	March 28	COES	HMH-2
72	March 28	COES	HMH-3
73	March 28	COES	HMH-4
92	April 18	CEC	HMH-5
93	April 18	CEC	HMH-7
94	April 18	CEC	HMH-7
95	April 18	CEC	HMH-7

TECHNICAL AREA: HAZARDOUS MATERIAL HANDLING
AUTHOR: CITY OF EL SEGUNDO

70. In the Hazardous Material Handling Section of the AFC, a figure should be provided to show the zone of influence of ammonia from a tanker truck release scenario (page 5.15-17) just as there is a figure for a pipeline release scenario.

Response No. 70: A figure showing the potential downwind extent of the tanker truck release is provided as Attachment 11. The methods and assumptions used in this offsite consequence analysis are discussed in Section 5.15.2.3 of the AFC. A tanker truck release scenario is discussed in Section 5.15.2.3.4, on page 5.5-17 of the AFC. As stated in the AFC, the results of the analysis for the tanker truck scenario extend to a significantly larger area than the pipeline scenario. The maximum zone of influence above the significance level extends outwards to a distance of 0.3 miles (approximately 1,600 feet from the release location). This encompasses a portion of the residential neighborhoods in the community of El Porto, located south of the generating station, as well as Vista Del Mar Boulevard and the public beach areas near the hypothetical release location. This offsite consequence analysis is very conservative and may over-predict actual release conditions.

The significant exposure threshold is defined by EPA as the downwind distance where the predicted concentration exceeds the Emergency Response Planning Guideline Level 2 (ERPG-2) value of 200 parts per million (ppm). The ERPG-2 value is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing any irreversible or other serious health effects or symptoms that could impair an individual's ability to take corrective action. The maximum downwind concentration is predicted in the guidance document as a function of the release rate and the ERPG-2 level. The isopleth in the figure represents the ERPG-2 (200 ppm) value.

71. In the Hazardous Material Handling Section of the AFC, it is not clear how high the ammonia concentration would be in a release under either pipeline or tanker truck release. It is stated that the levels would exceed significance (ERPG-2 level) but do not state if they would reach or exceed the IDLH or lethal level.

Response No. 71: The analysis for the accidental release scenarios followed the procedures outlined in the CalARP program showing the significance zone for the proposed project. The program does not require additional analysis associated with other levels within the impact zone. However,

a screening analysis was conducted, based upon the results from the previous modeling to estimate the potential downwind distances to the IDLH and lethal zones. Based upon the screening analysis, it is estimated that the lethal zones for the pipeline release and the tanker truck release would extent approximately 50 feet and 160 feet, respectively, from the center of the spill. At these distances, there would be no lethal zones of impact offsite from the facility.

The maximum distances of the IDLH zone for the two releases could extent out approximately 350 feet for the pipeline release and approximately 1,050 feet from the tanker truck release. At these distances, the pipeline release could extent just beyond the western property boundary on the beach area and to the parking area to the north. The offsite extent of the tanker truck release could affect approximately 1,800 feet of beach to the directly west of the facility; no residential locations are projected to reach these levels. It should be noted that the conditions predicting these results only occur during the nighttime conditions; daytime conditions are expected to have much lower impacts.

72. The AFC does not appear to include an analysis of the soil conditions beneath the Units 1 and 2, which would be replaced.

Response No. 72: In December 2000, URS conducted a Phase I Environmental Site Assessment (ESA) of the El Segundo Generating Station on behalf of El Segundo Power II LLC. Information gathered during the Phase I ESA was used to assess current soil and groundwater conditions beneath the Generating Station and may be used to assess soil and groundwater conditions beneath Units 1 and 2. A list of reports reviewed as part of the Phase I ESA are provided for reference in the Phase I ESA report; the report is provided in Appendix T in Volume II of the AFC. Also please refer to the Executive Summary and Section 4.0 of the Phase I document for a summary of soil conditions at the Generating Station.

Based on the review of reference documents listed in the Phase I ESA report, groundwater impacted with petroleum hydrocarbons is suspected beneath Units 1 and 2. Hydrocarbons were detected in groundwater in monitoring wells around Units 1 and 2 (e.g., EOW-18, EOW-35, and MW-4S). These wells were sampled in 1997 and 1998 by NRG Energy during their due diligence investigation in connection with the purchase of the Generating Station from Southern California Edison (SCE). The primary source of hydrocarbons in groundwater

beneath Units 1 and 2 is the Chevron Refinery, located east of the Generating Station.

Soil sampling conducted by NRG Energy in 1997 and 1998 around Units 1 and 2 suggests that soils near the water table (located approximately 12 to 14 feet below grade in the vicinity of Units 1 and 2) have been impacted by hydrocarbons in groundwater. The shallow soils (surface to approximately 5 feet below grade) around Units 1 and 2 were considered to have de minimis levels of hydrocarbons, where detected. According to ASTM standards, de mimimis conditions are those conditions that do "… not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies." Based on the sampling results, it is likely that soil directly beneath Units 1 and 2 is also impacted at a depth coincident with the water table due to hydrocarbons present in groundwater. Although shallow soil samples have not been collected and sampled directly beneath Units 1 and 2, there is a possibility that soil directly beneath Units 1 and 2 may be or have been impacted by activities associated with operations in Units 1 and 2. However, the impacts are expected to be de minimis.

73. The AFC should provide an analysis of the soil conditions beneath the SCE oil storage tanks, which will be demolished as part of the project.

Response No. 73: Please refer to Phase I and Phase II soil investigations provided to the City of El Segundo by SCE as part of their application submittal related to demolition of the tank farm.

In December 2000, URS conducted a Phase I ESA of the El Segundo Generating Station on behalf of El Segundo Power II LLC. The purpose of the Phase I ESA was to document recognized environmental conditions (REC) at the Generating Station resulting from previous on-site or off site activities. Previous investigation reports referenced in the Phase I ESA were reviewed which documented conditions within the Tank area. These conditions are summarized in the Executive Summary and in Section 4.0 of the Phase I ESA. The Phase I ESA is provided as Appendix T in Volume II of the AFC. Investigation reports for the south fuel oil above-ground storage tank (AST) indicate that there has been no substantial leakage from the AST; however, an estimated 1,000 cubic yards of soil was reported to be impacted with total petroleum hydrocarbons (TPH). TPH concentrations up to 248,000 milligrams per kilogram (mg/kg) were detected in this area. According to SCE, the more significantly impacted soils beneath the AST were reported to be

limited to 18 inches below ground surface. Edison installed a double-bottom and leak detection system on the south AST. At the north fuel oil AST location, soil samples detected TPH up to 6,400 mg/kg. A double-bottom and leak detection system was not installed on the north AST; therefore, the subsurface beneath the north AST was not investigated. Edison received approval from the Regional Water Quality Control Board, Los Angeles Region (RWQCB) to leave the contaminated soil in place until the tank is decommissioned or removed.

Elevated TPH concentrations were reported in soil in the area beneath the displacement-oil AST. The displacement AST is located within the AST area, between and east of the north and south ASTs. TPH in the area of the displacement oil AST were reported at concentrations up to 62,000 mg/kg. Impacted soil was reported to exist to a depth of up to approximately 20 feet below ground surface. TPH in soil beneath the ASTs will likely require management by a regulatory agency when these ASTs are removed.

BACKGROUND

Section 3.7.5 of the AFC suggests that the proposed aboveground aqueous ammonia pipeline will be constructed to meet state and local regulations and applicable industrial standards.

DATA REQUEST

92. Please identify and cite all those regulations that apply and the applicable industrial standards. Also, provide a description of the operating conditions of the pipeline and related safety features that would be incorporated. Further, demarcate segments of the pipeline that would be underground, if applicable.

Response No. 92: The aboveground aqueous ammonia supply pipeline from the Chevron Refinery to the existing 20,000 gallon storage tank on the ESGS site will be designed in accordance with ASME B31.3 – Process Piping and ASME B31.1 – Power Piping. ASME B31.3 governs on the refinery portion of the pipeline while ASME B31.1 governs from the ESGS property line to the on-site storage tank. The 29 percent solution of aqueous ammonia will be pumped from the Chevron Refinery through a single-walled, 3-inch Schedule 40, carbon steel pipeline that is routed primarily aboveground. The aqueous ammonia forwarding pump will have an approximate discharge pressure of 40 PSIG.

On the Chevron property, the pipeline will be routed aboveground with the exception of two underground portions where the pipeline will penetrate berms along the route. The aboveground portion of the pipeline will utilize existing pipe support structures and at the existing overpass serving the Chevron Marine Terminal, the pipeline will cross under Vista Del Mar. The overpass is immediately north of the ESGS property. The new pipeline will continue south on Chevron property to the north perimeter fence of the power plant site.

After crossing the fence on the north property line of the ESGS, the new line will be routed along the retaining wall on existing pipe support structures to the north berm of the ESGS switchyard. At that point, the pipeline will be routed underground along the east side of the switchyard to the existing aqueous ammonia storage tank. The underground portion of the pipeline will be tape wrapped and an appropriate quantity of sacrificial anodes will be installed to protect the underground pipe from corrosion. Approximately 85 percent of the total pipeline length will be located aboveground.

No special requirements exist for the installation of the proposed aqueous ammonia pipeline other than the design requirements presented in ASME B31.3 and ASME B31.1. A piping system carrying a 29 percent solution of aqueous ammonia does not pose the potential impact as does an anhydrous ammonia system. Minimum safety requirements for an anhydrous ammonia system are outlined in ANSI K61.1 – Safety Requirements for the Storage and Handling of Anhydrous Ammonia, but no such standard exists for an aqueous ammonia system.

ESGS presently implements a Risk Management Plan (RMP) for the aqueous ammonia storage tank, and this RMP meets the requirements of 40 CFR Part 68. The RMP will be revised to incorporate the new pipeline.

BACKGROUND

Section 5.15.2.3.3 details the modeling and associated results associated with two ammonia release scenarios based on a 200-ppm ammonia endpoint. Staff routinely uses a 75-ppm endpoint with a 30-minute exposure for evaluation of significant public health impacts associated with potential ammonia releases. The 200-ppm criterion is more a planning and emergency response guideline unlike the 75-ppm criterion, which is a public exposure criterion.

DATA REQUEST

93. Please revise the OCA to include the 75-ppm –30-minute criterion and document the corresponding results. Also, estimate and document probability estimates (yearly and plant life) for both release scenarios.

Response No. 93: A revised OCA for the ammonia release described above will be provided on or before April 27. ESP II will supplement this response with the revised OCA for ammonia.

BACKGROUND

Table 5.15.2 suggests that hydrazine is to be stored and used on site. Hydrazine is a poison, flammable and corrosive and can pose a potential for significant public health impacts though it's stored at levels below CALARP thresholds.

DATA REQUEST

94. Conduct an OCA for two releases scenarios- one involving a storage tank rupture and the other a release during product unloading. Use similar climatic conditions as that for ammonia but use either the SCREEN3 or ISCST3 model.

Response No. 94: An OCA for the two release scenarios described above is in progress. Results of the OCA will be provided on or before April 27. ESP II will supplement this response with the revised OCA for hydrazine.

BACKGROUND

Table 5.15.2 indicates 70,000 cubic feet of flammable hydrogen would be stored onsite in a carbon steel tank. Pertinent details about the specifications of the tank are however lacking.

DATA REQUEST

95. Please provide specifications about the tank including inherent safety features and the construction and operational codes and standards.

Response No. 95: Currently, the El Segundo Generating Station (ESGS) has approximately 38,000 SCF of hydrogen storage on-site. This storage is composed of two banks of 12 horizontal cylinders each, and these cylinders are ASME pressure vessels having a maximum allowable working pressure of 2,200 PSIG. The 12 cylinders in each of the storage banks are tied together by a manifold, each manifold is

equipped with two safety relief valves (set at 2,200 PSIG), and the pressure of the hydrogen being supplied to the electric generators is reduced by pressure regulating valves. The hydrogen banks, valves, and piping up to the regulators are owned and maintained by the supplier of the hydrogen gas. Piping and valves downstream of the regulating valves are the responsibility of ESGS.

Hydrogen storage at ESGS currently serves all four of the existing units at the site and provides hydrogen for cooling of each electric generator. With the removal of Units 1 and 2 and the addition of Units 5, 6, and 7, there will be a net increase of hydrogen usage on-site. The existing banks could be used to supply hydrogen to the redeveloped plant, but more frequent deliveries from the offsite hydrogen supplier will be required. Incorporating an additional bank of 12 horizontal storage cylinders in the same location as the current storage banks will obviate the need for a significant increase in hydrogen deliveries.

By installing the third bank of storage cylinders adjacent to the existing outdoor storage, the requirements of NFPA 50A, "Gaseous Hydrogen Systems at Consumer Sites" will continue to be met.

TECHNICAL AREA: LAND USE

SUMMARY OF LAND USE DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, several land use issues have arisen and several data requests have been issued. One issue, the need for a variance for the height of the exhaust stacks has been resolved. As suspected, the exclusion from the height limit for smokestack structures eliminates the need for a variance.

Other issues have involved the current make up of the parcels that comprise ESGS and how those parcels were created, specific lot lines and general land use compliance. Another issue that arose is the status of the Local Coastal Program established by the City of El Segundo. These issues have been answered in the below data responses.

ESP II looks forward to continuing to work with the City of El Segundo regarding land use issues. ESP II believes that ESPR can be approved in compliance with all applicable Laws, Ordinances, Regulations, and Standards, and with no unmitigated significant impacts.

The following Data Requests have been received regarding Land Use:

Data Request	Applicant's Response Date	Source of Data Request	Page
26	March 28	CEC	LU-2
27	March 28	CEC	LU-2
40	March 28	CEC	LU-2
41	March 28	CEC	LU-3
61	March 28	CEC	LU-3
65	March 28	CEC	LU-3
66	March 28	CEC	LU-3
67	March 28	CEC	LU-3
CCC-4	April 18	CCC	LU-4
CCC-19	April 18	CCC	LU-4
40s	April 18	CEC	LU-4
66s	April 18	CEC	LU-4
67s	April 18	CEC	LU-5

TECHNICAL AREA: LAND USE
AUTHOR: MARK R. HAMBLIN

BACKGROUND

The AFC (AFC, page 3.2-1, third paragraph, page 5.9-2, fourth full paragraph) does not explain nor show the land division procedure that was used (e.g. parcel map, etc.) to divide the original 36 acre Southern California Edison (SCE) property to create 3 parcels consisting of 24.7 acres (currently owned by El Segundo Power LLC); 2.24 acres (the existing SCE switchyard); and 9 acres (the existing SCE fuel oil tank farm). The State Subdivision Map Act (*California Government Code Sections 66410-66499*) provides the State requirements and procedures for conducting a land division for the purpose of sale, lease or finance.

DATA REQUEST

26. Explain the land division procedure used to divide the former 36 acre SCE power generation property to create the current three parcels.

Response No. 26: A copy of a recorded parcel map is provided as Attachment 12.

27. Show on a map (parcel map, lot line adjustment map, etc.) the 3 legally created parcels that comprises the former 36 acre SCE power generation property.

Response No. 27: Maps and legal descriptions of the present configuration of the three legally created parcels that comprise the former 36-acre property are provided in Attachment 13.

Note to the Reader: Responses to Data Requests 40, 41, 61, 65, 66 and 67 are provided below. These Data Requests originated from the City of El Segundo, and address land use issues.

40. A subdivision map for the splitting of the SCE Tank parcel into two parcels has been submitted to the city for review. The AFC should include a discussion of the proposed subdivision and its relationship to the power plant site.

Response No. 40: Attachment 14 provides parcel information for the tank farm area. Drawing 098496-OS-S3003, Revision 1 (Figure 3.5-1A) and Drawing 098496-OS-S3004, Revision 1 (Figure 3.5-1B) were prepared to show the various land parcels on the El Segundo Generating Station site, including the easement parcel within parcel 2 (tank farm). These drawings are provided as Attachment 15.

41. The proposed maintenance and administrative buildings adjacent to the SCE tanks, depicted on figure 3.5-1b appear to be close to the existing property line as well as the proposed subdivision property line. The property lines should be clearly distinguished on the plans.

Response No. 41: Drawing 098496-OS-S3003, Revision 1 (Figure 3.5-1A) and Drawing 098496-OS-S3004, Revision 1 (Figure 3.5-1B) were prepared to show the various land parcels on the El Segundo Generating Station site and indicates the location of the administration building in relation to existing lot lines. These drawings are provided as Attachment 15**.**

61. The description of LORS on page 3.12-5 should indicate the reference the entire El Segundo Municipal Code.

Response No. 61: A revised Table 3.12-1 is provided as Attachment 16.

65. The land use section of the AFC should discuss the Coastal Development Permit requirements of the California Coastal Commission and its implementing authority, the City of El Segundo, and the applicability of such to the proposed project.

Response No. 65: Under provisions of the Coastal Act, the California Coastal Commission retains review authority over power plants sited in the Coastal Zone. The City of El Segundo has an adopted Local Coastal Plan, the provisions of which will apply to certain elements of the ESPR project. Specifically, it is anticipated that the city would process and issue implementing permits (e.g., demolition and construction permits), as appropriate, for the project and consistent with the conditions of the approved AFC.

66. The land use section discusses different permitting process for the height of the proposed exhaust stacks. Administrative Use Permits or Conditional Use Permits are not appropriate permitting options for the proposed height increase. These processes can only be used for uses, not for deviations from development standards in the zoning code. A variance would be the appropriate processing option for requesting a deviation from a development standard.

Response No. 66: Comment noted.

67. The use of off-site laydown yards may require approval of a discretionary permit from the City of El Segundo (Page 5.9-45).

Response No. 67: Comment noted.

CCC-4. The California Coastal Act should be included in applicable LORS sections throughout the document.

Response No. CCC-4: ESP II agrees with this assessment and acknowledges that the California Coastal Act is directly applicable to the LORS compliance analysis of several sections of the AFC document. The California Coastal Act will be complied with by ESPR.

CCC-19. 5.9.3 Stipulated Conditions: We concur with the Stipulated Conditions, with one change – we request that the CEC request a statement from the City that the proposed project meets applicable requirements of the Local Coastal Plan.

Response No. CCC-19: As described in response to CCC-4, the California Coastal Act is an applicable LORS. Coastal Development Permits are not required, however, for power plant projects governed by the Warren-Alquist Act (PRC Section 25500 et seq.). Because of this exemption, a Coastal Development Permit will not be required from the City of El Segundo. The City's General Plan, Local Coastal Program, and specific land use ordinances are being incorporated and addressed in the AFC process, as required.

Note to the reader: The following Land Use Data Requests are supplemental to previous data requests.

Supplement to No. 40. Provide additional information concerning the tank farm parcels. Specifically, what future land use actions, if any, will be required with respect to acquisition of the tank farm.

Supplemental Response No. 40: No further land use regulatory action will be required to effect the acquisition of the tank farm. No lot line adjustment or other subdivision action is planned for this area at this time.

Supplement to No. 66. At the March 28 public workshop, the City of El Segundo staff clarified that the proposed stack height is exempt from the City's Height Ordinance.

Supplemental Response No. 66: In the AFC ESP II provided its analysis that no variance was required for stack height because the stacks were smoke stack structures, exempt from the height requirements. The City of El

Segundo acknowledged this at the March 28 workshop thereby removing the variance issue from the project.

Supplement to No. 67. At the March 28 public workshop, the City of El Segundo staff clarified that certain offsite uses may require a discretionary permit.

Supplemental Response No. 67: ESP II agrees that any use of an offsite location that is not in compliance with its current zoned use would require a discretionary permit. Moreover, certain uses may require discretionary permits. In cases where discretionary permits are required, the CEC process is intended to handle the impact consideration for such permits and will fulfill such requirements.

TECHNICAL AREA: NOISE

SUMMARY OF NOISE DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, Noise has been an important issue for local residents in the El Porto Community of the City of Manhattan Beach. ESP II conducted additional monitoring and analysis to ensure that the old oil storage tanks are correctly accounted for in ESPR. This additional work, and the discussions and data responses have helped to clarify exactly what changes ESPR will bring to noise conditions. ESP II's final analysis has resolved further that ESPR will have no Significant Noise impacts due to operation of ESGS as modified by ESPR.

A particular area of concern has also been the construction noise levels and locations and times of that noise. The California Energy Crisis has led to expectations that power plants be built as quickly as is allowed under the law and ESP II recognizes that need. ESP II also recognizes the need to minimize noise levels at night to levels that do not disturb local residents in the peaceful use of their homes. For this reason, ESP II has met with local residents, has and is investigating potential noise sources and means by which to reduce them. ESP II is confident that a combination of on-site measures and an effective noise complaint program will ensure that these goals are met.

The following Data Requests have been received regarding Noise:

Data Request	Applicant's Response Date	Source of Data Request	Page
28	March 28	CEC	NOI-2
133	April 13, April 18	CEC	NOI-2
134	April 13, April 18	CEC	NOI-4
CCC-21	April 18	CCC	NOI-5
28s	April 18	CEC	NOI-5

TECHNICAL AREA: NOISE
AUTHOR: JIM BUNTIN

BACKGROUND

The CEC typically assesses compliance with the 5 dB noise level increase criterion by comparison of the steady state noise level due to the power plant to the average (or typical) L_{90} values obtained during nighttime hours, as noted by the applicant. The Cities of El Segundo and Manhattan Beach apply a similar criterion to the median (L_{50}) ambient noise level. The applicant has summarized the average hourly L_{90} and L_{50} values collected in the long-term noise measurement periods in Table 5.12-1, and in the text of the AFC. However, the hourly noise level data were not provided.

DATA REQUEST

28. Please provide the hourly L_{eq}, L_{50}, and L_{90} values for noise measurement sites LT-1, LT-2, LT-1a, LT-2a, LT-3 and LT-3a in tabular format. Note the time periods where extraneous noise sources affected the noise level data.

Response No. 28: Attachment 17 provides tabular L_{eq}, L_{50}, and L_{90} noise data for the sites requested, in 15-minute, hourly, and cumulative increments. The long-term noise data was collected by unattended noise monitoring devices; thus no information beyond the following regarding "extraneous noise sources" is available. For measurements LT-1 and LT-1a, the most likely dominant noise source measured between the hours of 20:00 - 7:00 and 19:30 – 6:45 respectively was nearby, nighttime construction activities. For measurement LT-2, relatively high noise levels during the 14:00, 16:00, 5:00 and 10:00 hours are believed to be caused by on-site tanker trucks passing very near the LT-2 monitor site. No other anomalous noise intervals are apparent.

Note to the reader: The following Noise data responses were docketed April 13 as a part of the Applicant's Noise and Visual Data Responses. The text of the data responses is provided below. Attachments related to the Noise and Visual Data Responses are available in the April 13 filing.

133. Please perform ambient monitoring immediately north of the tanks and simultaneously on 45th Street in Manhattan Beach. Include the appropriate level of analysis to ascertain industrial or plant generated noise versus ocean wave and vehicular traffic.

Response No. 133: Ambient monitoring was conducted as requested. Additionally, as part of the ESP II's efforts to work with the ESGS community, monitoring efforts were coordinated with local residents. Additionally, ESP II agreed to consider the effects of the removal of the two large fuel oil storage tanks as part of ESPR.

New noise measurements were taken on April 1 and 2 between 11:30 PM and 2:30 AM at locations on 45th Street and on the ESGS site northerly of the fuel storage tanks (see attached summary). The data was analyzed to determine what the noise contribution from the plant would be once the fuel tanks are demolished. The data indicates that the incremental change from tank removal would not exceed 3 dBA (L_{50}). The measurements also indicate that the dominant noise contribution from the site would be from existing Unit 4 and the existing gas compressor, neither of which is a part of the project.

The adjacent ocean is clearly a major contributor to ambient noise levels at the 45th street residences. Ambient nighttime noise includes the general sounds of waves crashing and the roar of the surf. The existing ESGS contributes moderately to the background noise also. However, it is evident that the existing tanks provide a barrier for the ESGS noise. Since removal of the tanks will only increase ambient noise levels less than 3 dba, it is probably accurate to say that overall, ESGS is a minor contributor to existing noise levels at the 45th street residences and that the dominant noise is of the ocean.

Removal of the fuel oil storage tanks on the south side of the ESGS boundary would result in short-term increases in noise levels at nearby noise-sensitive land uses. The total duration of removal is estimated to be four to five weeks; demolition of the tanks is expected to require one week, and additional cutting up of the tank pieces and removal from the project site is expected to require three to four weeks. The major equipment anticipated to be needed for the first phase of the work (tank demolition) would be hydraulic shears (mounted on a tracked excavator). The major equipment anticipated for the second phase of the work (additional cutting and removal) would be hydraulic shears, cutting torches, a tracked loader and heavy trucks.

Table 1
Summary of Results: Storage Tank "Insertion Loss" Measurements and Analysis

Measured Ambient Noise Levels (at Nearest Residence (ST-18A/ST-18B)):

Location	Leq	L90	L50
ST-18A	62	61	62
ST-18B	50	48	50

Estimated Noise - Plant Only (based upon measurements) from El Segundo Power Plant at Nearest Residence (ST-18A/ST-18B) without Storage Tanks [1]

Location	Leq	L90	L50
ST-18A	52	51	52
ST-18B	52	51	52

Resultant Difference[2] (between Measured Ambient Noise Levels and Estimated ESPP Noise Levels without Storage Tanks)

Location	Leq	L90	L50
ST-18A	-10	-10	-10
ST-18B	2	3	2

Subjective Effect of Changes in Noise Levels[3]

Change in Level (dBA)	Subjective Effect
3	Barely Perceptible
5	Clearly Perceptible
10	Twice as Loud

Leq – Sound level containing the same total energy over a given period of time.
L90 – Sound level exceeded 90 percent of the time.
L50 – Sound level exceeded 50 percent of the time.
ST-18A – Outside deck area on 4420 The Strand, Manhattan Beach, Ca 90266.
ST-18B – Inside residence with window open on 4420 The Strand, Manhattan Beach, Ca 90266.

1 - These calculations were verified independently by propagating the noise data from ST-22 out to the ST-18A/ST-18B location. Agreement between the two data sets was good, varying 0.3 dB to 1.5 dB (ST-22-propagated data would be lower in all cases).

2 - Negative values indicate that the measured ambient noise levels would exceed the noise levels from the plant. Positive values indicate that the plant noise levels would exceed the measured ambient noise levels.

3 - Source: Hassall, J.R. and K. Zaveri. 1988. Acoustic Noise Measurements. Fifth Edition. Brüel and Kjær Instruments, Inc. Copenhagen, Denmark.

134. Please provide proposed mitigation schemes if the data reveals the potential for noise impact.

Response No. 134: As explained in response to Data Request 133, above, no significant impacts are expected to Noise resources from ESPR. Consequently, no mitigation measures are required beyond the standard CEC conditions of certification, which ESP II have been stipulated to.

Because ESP II is committed to working with the community, however, community input has been sought regarding ways in which ESPR can be enhanced to ensure that it represents a positive contribution to the community. An April 12 community meeting was conducted in the City of Manhattan Beach to receive input. A sample conceptual rendering was provided showing a 20-foot sound wall from several views with and without landscaping. Such a wall would effectively replace the decommissioned fuel tanks from a noise perspective and substantially enhance the aesthetics of the southern property line.

In addition to the one-on-one discussions and the presentation of noise data and visual solutions on April 12, the CEC has designated the April 18 workshop as having a visual/noise focus. Residents will have the opportunity to comment again on the information and design solutions that are being explored by the Applicant. The community work completed to date should allow the April 18 workshop to provide clear resolution as to what enhancements ESPR could have that would satisfy the community and allow them to view ESPR as a positive contributor to the environment.

CCC-21. Based on the information provided thus far, it appears that mitigation measures similar to those in Section 5.12.4 of the AFC are appropriate and necessary, and should be a condition of Energy Commission approval. However, these mitigation measures would affect the appearance of the facility and should also be evaluated as part of Section 5.13 Visual Resources.

Response No. CCC-21: Comment noted. As described in the above discussion, a community input process is underway to coordinate the noise-related and visual-related enhancements for optimal beneficial effect.

Note to the reader: The following Noise Data Request is supplemental to previous data requests.

Supplement to No. 28. As discussed in the March 28 public workshop, the Applicant has agreed to provide an analysis of noise impacts associated with demolition of the SCE tanks.

Supplemental Response No. 28: The following summary is provided regarding demolition of the SCE tanks. Removal of the three fuel oil storage tanks on the south side of the ESGS boundary would result in short-term increases in noise levels at nearby noise-sensitive land uses. The total duration of the removal project is estimated to be four to five weeks; demolition of

the tanks is expected to require one week, and additional cutting up of the tank pieces and removal from the project site is expected to require three to four weeks. The major equipment anticipated to be needed for the first phase of the work (tank demolition) would be hydraulic shears (mounted on a tracked excavator). The major equipment anticipated for the second phase of the work (additional cutting and removal) would be hydraulic shears, cutting torches, a tracked loader and heavy trucks.

No published noise data is available for hydraulic shears or cutting torches; according to construction demolition supervisors, this is because the noise levels from hydraulic shears and cutting torches is relatively low compared to other heavy construction equipment. The hydraulic shears are effectively a huge pair of scissors designed to slice through large pieces of steel. According to construction demolition supervisors, the most noticeable noise source related to the tank removal would be the backup alarms used by the heavy machinery as a safety measure. Additionally, the noise created by the tracked excavators, tracked loaders and heavy trucks would be factors in the construction noise.

The nearest noise-sensitive land use (residences along 45th Street in Manhattan Beach) is located approximately 350 feet from the center of tank removal activities. Based upon the available published noise data for tracked excavators, the noise level at the nearest noise-sensitive land uses during the first work phase (demolition) would be approximately 66 dBA. This noise level would be approximately 5 decibels above the daytime ambient noise level in the area as measured at ST-4.

Based upon the available published noise data for tracked excavators, tracked dozers, and trucks, the noise level at the nearest noise-sensitive land uses during the second work phase (demolition) would be approximately 75 dBA. This noise level would be approximately 14 decibels above the daytime ambient noise level in the area as measured at ST-4.

Although the construction noise levels as estimated above would be clearly audible above the daytime ambient noise levels, the noise would be for a brief period (four to five weeks). Additionally, tank removal activities would be limited to daytime hours from 7:30 a.m. to 6 p.m., Monday through Friday, and from 9 a.m. to 6 p.m. Saturday.

TECHNICAL AREA: PROJECT DESCRIPTION

SUMMARY OF PROJECT DESCRIPTION DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, multiple data requests have been asked and answered regarding the project description for ESPR. An important resolution was the means by which the inclusion of the removal of the old SCE oil storage tanks was provided for. The original AFC included the tank farm area, and ensured that all use of the site as part of ESPR was in compliance with applicable law. Because the tank removal itself, however, was already in progress, the tanks had been considered removed for starting purposes of ESPR. Per the City of El Segundo's request, ESP II provided necessary information in all applicable discipline areas to ensure that the removal of the tanks is within the project description for ESPR.

ESP II also received and answered numerous other data requests pertaining to project description. Some of these asked for specific concessions or assurances. For instance, ESP II confirmed that the 45th Street entrance will not be used for construction. Collectively, these data responses have helped add to project information allowing all other discipline areas to be well founded in their impact and LORS compliance analysis.

The following Data Requests have been received regarding Project Description:

Data Request	Applicant's Response Date	Source of Data Request	Page
35	March 28	COES	PD-3
36	March 28	COES	PD-3
37	March 28	COES	PD-3
38	March 28	COES	PD-3
39	March 28	COES	PD-3
42	March 28	COES	PD-4
43	March 28	COES	PD-4
44	March 28	COES	PD-4
46	March 28	COES	PD-4
47	March 28	COES	PD-4
58	March 28	COES	PD-5
59	March 28	COES	PD-5
60	March 28	COES	PD-5
88	March 28	COES	PD-5
CCC-5	April 18	CCC	PD-6
CCC-6	April 18	CCC	PD-6
CCC-7	April 18	CCC	PD-7
COES-1	April 18	COES	PD-7
COES-2	April 18	COES	PD-8
38s	April 18	COES	PD-8
46s	April 18	COES	PD-9
88s	April 18	COES	PD-9

TECHNICAL AREA: FACILITY DESCRIPTION
AUTHOR: CITY OF EL SEGUNDO

35. It is not clear from the project description if units 1 and 2 are currently operating or their operational load used in the AFC analysis.

Response No. 35: Units 1 and 2 are currently running. Operational load used in the analysis is 175 MW gross (not base loaded). A maximum load of 175 MW each is used in the analysis.

36. It is not clear if a portion of the net station capacity increase of 280 megawatts is attributable to existing units 3 and 4, given the statements in the air quality analysis which seem to indicate emissions would also increase for units 3 and 4. How much of an increase in generating capacity for the station would be attributed to the replacement of units 1 and 2 versus any increase use of units 3 and 4?

Response No. 36: All increase is attributable to replacement of Units 1 and 2.

37. Provide information about the relationship of the planned aqueous ammonia pipeline and a proposed Chevron project to renovate storage tanks for aqueous ammonia at the same location.

Response No. 37: There is no relationship between these projects.

38. The AFC should include a full analysis of the impacts of demolition of the Southern California Edison (SCE) oil storage tanks, since the demolition of the tanks appears to be an integral part of the project to make that area available a laydown/staging area.

Response No. 38: The Applicant is in the process of acquiring the oil storage tank property from SCE. Demolition of the tanks will take place regardless of the outcome of the AFC process. Demolition of the tanks will be subject to the CEQA requirements, as administered by the City of El Segundo as lead agency. A full analysis of the impacts of demolition will occur as a part of the tank farm demolition CEQA process prior to the tank farm project approval.

39. The AFC should provide details of the planned use of the SCE tank area after utilization as a laydown/staging area. For instance, the applicant has previously informed the City of El Segundo that there are plans to construct an office building on the site.

Response No. 39: The Applicant has no current plans for use of the site after utilization of the site as a laydown/staging area. The administration building referred to is proposed to be located immediately north of the tank farm, as shown in Figure 3.5-1B, provided as Attachment 13 to this response package.

42. The floor area of the proposed maintenance and administrative buildings does not appear to be indicated in the AFC (page 3.9-1).

Response No. 42: The total floor area of the proposed maintenance and administration building is 15,000 square feet.

43. The AFC should include an analysis of alternative design to reduce the exhaust stack height so they would not be taller than the existing exhaust stacks.

Response No. 43: The stack has been designed to ensure that the project will comply with all applicable air quality requirements. In particular, the stack height analysis is driven by a regulation established by the South Coast Air Quality Management District.

44. The AFC should include additional discussion about the extent of construction impacts related to the construction of the two proposed water pipelines in the City of El Segundo.

Response No. 44: As discussed in response to Data Request 18, at such time as the specific pipeline route is selected and approved, the pipeline installation will be subject to the normal permitting requirements, as administered by the City of El Segundo and in coordination with West Basin Municipal Water District. Standardized mitigation measures will be employed during pipeline construction.

46. Provide information about alternative ammonia sources if Chevron does not supply the ammonia from the adjacent refinery. The city's understanding is that Chevron has received a business plan for this service but has not formally committed to it yet. Without such a commitment, alternative sources must be analyzed.

Response No. 46: Ammonia deliveries are currently made by truck. The normal truck route is as follows: Either 60 or 10 freeway to the 605 freeway south to the 105 freeway west. Exit on Imperial Highway west to Vista Del Mar and south to the plant.

47. The AFC should discuss the method for demolition of the existing exhaust stack in terms of safety.

Response No. 47: The demolition contractor, when selected, will be required to incorporate appropriate safety precautions to protect users of the beach and bike path, as well as workers in the plant, from demolition activities. A site-specific safety plan will be developed for all elements of the project, including demolition of the stacks. This plan will be provided for review and approval by the appropriate agencies prior to initiating the work.

58. The AFC should include more definitive locations for off-site parking and not defer analysis to post-construction plan submittal.

Response No. 58: Locations of offsite parking are identified on Figure 3.2-1. At this time, it is not known whether all of the sites, or some combination of sites, will be used for off-site parking. Analyses provided throughout the AFC consider the potential use of all sites for parking.

59. The AFC should provide a discussion of the status of commitments from property owner for providing off-site parking and staging areas, so the viability of these proposals can be determined.

Response No. 59: The Applicant continues to have discussions or negotiations with the owners of these areas as necessary to gain the control necessary for the proposed use.

60. The AFC should identify the location of the rail unloading facility discussed on page 3.9-14.

Response No. 60: The proposed rail unloading facility is located on the H. Kramer and Company (Kramer) property, as shown in Figure 3.2-1 (referred to as site 1 in the legend). This property is located in the City of El Segundo and is bounded by Douglas Street to the east, Sepulveda Boulevard to the west, Rosecrans Street to the south, and El Segundo Boulevard to the north. Access to this site is via Chapman Way off of Douglas Street.

Note to the Reader: Response to Data Request 88 is provided below. This Data Request originated from the City of Manhattan Beach, and addresses facility description issues.

88. Please provide a detailed map showing the new water supply line route as described in Section 3.8.1.5.

Response No. 88: Section 3.8.1, item 5, is revised to state: *"Install new water supply line(s) from the City of El Segundo to provide firewater/service water to Units 3 and 4; and, install new sanitary discharge line from the City of Manhattan Beach."*

A new water line route is proposed within the City of El Segundo, as shown on Figure 3.2-1 (referred to as R1 in the legend). Two water lines will be constructed in a common trench starting at the intersection of El Segundo Boulevard and Eucalyptus Drive, then west to Richmond Street, north on Richmond (or other nearby street within the designated zone of alternative pipeline routes) to Grand Avenue, then west to Vista del Mar, then south to the generating station property.

As described in Section 3.7.4, a sanitary discharge line is proposed to be constructed in the City of Manhattan Beach. The line route is shown on Figure 3.2-1 (referred to as R2 in the legend). Connection to the City of Manhattan Beach sewer will require routing of approximately 150 feet of forced flow sewer line from the site to an existing manhole at the intersection of The Strand and 45th Street. The pipeline will be constructed of 3-inch diameter PVC pipe and buried under a minimum of 24 inches of compacted soil.

CCC-5. 3.3.1 Topography: Please describe the amount of containment provided for the existing and proposed tanks.

Response No. CCC-5: None of the proposed tanks for the ESPR project contain liquids which require secondary containment. Of the three existing tanks at the south end of the project site, only the SCE oil receiver tank will remain. The containment basin for this tank will not be affected by the project. In any case, the volume of the containment basin is sufficient to hold the entire contents of the tank plus the runoff from tributary areas associated with a 100-year, 24-hour precipitation event.

CCC-6. 3.3.2.4 Slope Stability: The AFC describes several reasons for potential slope instability at and near the facility. The applicant should provide additional information about when and how the preferred mitigation measures to improve slope stability (e.g., soil nailing, retaining wall, etc.) will be selected. Impacts to coastal resources may vary depending on the method(s) selected, and the Coastal Commission will need to evaluate the preferred measures as part of its review.

Response No. CCC-6: Please refer to our response to Data Request 11 in the subject area of Geologic Hazards.

CCC-7. 3.3.2.5 Shoreline Erosion: The AFC describes two possible methods of shore protection – beach nourishment and enhancement of an existing rock revetment – each of which would affect coastal resources. We are concerned that the site appears to be subject to a relatively high rate of ongoing beach erosion and that placing additional infrastructure on the site will generate the need for additional shoreline protection. [See also Section 5.0 below.]

Response No. CCC-7: Please refer to our response to Data Request 12 in the subject area of Geologic Hazards.

Note to the reader: The following data requests originated from the City of El Segundo.

BACKGROUND

It is the understanding of the City of El Segundo that neither the applicant, El Segundo Power II, LLC, nor its parent company, Dynegy/NRG, have previously developed power plants in the State of California and that the California Energy Commission is charged with insuring that the applicant has the technical capabilities and financial resources to carry out the project should it be approved.

DATA REQUEST

COES–1. Please provide a discussion of the technical capabilities and project experience related to completing power plant projects either in California, the United States, or abroad that would demonstrate that the proposed project could be completed in a timely manner.

Response No. COES-1: The Applicant, El Segundo Power II LLC, together with its affiliates, predecessors, and contractors, is highly experienced in design, engineering, construction, financing, and operations of power plant projects of this nature. Completed power projects in California include:

- Badger Creek Limited
- Bear Mountain Limited
- Chalk Cliff Limited
- Corona
- Crockett
- Double “C” Limited

- High Sierra Limited
- Kern Front Limited
- Live Oak Limited
- McKittrick Limited
- San Joaquin

COES-2. Please provide a discussion of the status of the proposed financing of the proposed power plant redevelopment. Will the cost of the power plant redevelopment be self-financed, or will capital be raised from outside sources? When will the finances be in place to insure that financing does not inhibit the completion of the project in a timely manner? Are there any financial hindrances due to the current California energy crisis that would impair the development of the project?

Response No. COES-2: Consistent with previous development efforts of this nature, financing arrangements will likely entail a combination of internal and external funding sources. The precise financing arrangements will be determined when the project is nearer to actual construction. The Applicant is confident that financing issues will not inhibit the completion of the project in a timely manner.

Note to the reader: The following Project Description Data Requests are supplemental to previous data requests.

Supplement to No. 38. Pursuant to the March 28 public workshop, the Applicant has agreed to include a discussion of tank removal to be reviewed and approved as a part of the ESPR Project.

Supplemental Response No. 38: Tank farm removal will proceed in a logical progression of steps over a period of six to nine weeks. Specific steps in this process include:

- Construct heavy load access road into bermed area
- Mobilize heavy equipment
- Modify existing drains and sumps as needed
- Tear down tanks
- Shearing of metal plates into portable pieces
- Truck out cut pieces of steel
- Remove and break asphalt and foundations
- Conduct confirmatory soil tests
- Stockpile and remove stained soils by truck

- Test remaining soil to applicable standards
- Import clean fill soil and recompact to applicable standards
- Prepare site for staging and fabrication/construction uses

These activities will occur concurrent with dismantling of the above-ground facilities of Units 1 and 2, and prior to foundation removal.

Impacts associated with the removal activities are described throughout this Data Response package, in specific issue areas, including visual and noise resources, traffic and transportation, soil and water resources, hazardous materials handling, and waste management.

Supplement to No. 46. Provide additional information concerning the present and future number of ammonia truck deliveries, assuming the ammonia pipeline is inoperable.

Supplemental Response No. 46: The project proposes to install an ammonia pipeline as an enhancement in order to avoid truck delivery. In the event that the line is inoperable, truck deliveries will be required at an estimated frequency of three trucks per four-day period. This is an increase over the present delivery frequency of about two trucks per four-day period.

Supplement to No. 88: As discussed at the March 28 public workshop, the Applicant is requested to take measures to ensure that access to the City of Manhattan Beach parking lot, located at the base of 45th Street and The Strand, is not blocked during ESPR construction activities. This access area is very narrow (about 20-25 feet wide) near the entrance to the parking lot.

Supplemental Response No. 88: Construction activities in the 45th Street area will be limited to installation of a sewer line connection. This work will be handled in close coordination with the City of Manhattan Beach to ensure minimum disruption to access.

TECHNICAL AREA: SOCIOECONOMICS

SUMMARY OF SOCIOECONOMICS DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, several Socioeconomic data requests have been asked and answered. No significant issues have arisen that change ESP II's analysis that ESPR complies with all applicable Laws, Ordinances, Regulations, and Standards, and has no unmitigated significant impacts.

The following Data Requests have been received regarding Socioeconomics:

Data Request	Applicant's Response Date	Source of Data Request	Page
68	March 28	COES	SOC-2
69	March 28	COES	SOC-2
96	April 18	CEC	SOC-3
97	April 18	CEC	SOC-3

TECHNICAL AREA: SOCIOECONOMICS
AUTHOR: CITY OF EL SEGUNDO

68. The socioeconomic section of the AFC should discuss the applicability of the El Segundo Traffic Mitigation Fee program to the project (Page 5.10-26).

Response No. 68: The El Segundo City Council has adopted Resolution No. 3969 establishing Traffic Mitigation Fees for new development. The Public Works Director will calculate a fee as provided for in the approved City of El Segundo Evaluation of Traffic Congestion Mitigation Fee Study. The ESPR project will submit an Application for Traffic Mitigation Fee Determination to the City of El Segundo Public Works Director prior to construction.

69. The socioeconomic section of the AFC should discuss the fact that there are no school fees that would be collected by the El Segundo Unified School District for the proposed project (page 5.10-27).

Response No. 69: Section 5.10.5.2 of the AFC discusses the applicability of school impact fees to the ESPR Project. This discussion is provided below:

California Government Code Section 65995-65997 (amended by SB 50), states that public agencies may not impose fees, charges, or other financial requirements to offset the cost for school facilities. However, the code does include provisions for levies against development projects near schools. The administering agency for implementing school impact fees in the project area is the City of El Segundo, Building and Safety Division. City of El Segundo staff has indicated that for all developments east of Sepulveda Boulevard, the school impact fees are given to the Centinela Valley Union High School District and the Wiseburn School District. No school impact fees are levied for development projects west of Sepulveda Boulevard. Since the proposed project site is west of Sepulveda Boulevard, no school impact fees would be imposed on the project (Huerta, Enrique, City of El Segundo Community and Economic Development Department, personal communication with Dan Vukovic, URS, November 1, 2000.).

BACKGROUND

Table 5.10-5 in the AFC presents the allocation of property taxes by agency for the El Segundo area. Section 5.10.2.3 describes the capital cost of the project and potential tax revenues to the City of El Segundo.

DATA REQUEST

96. Please provide information on the assessed value of the present plant components to be removed and a projection of the value of the improvements (the capital cost).

Response No. 96: Currently the Los Angeles County Assessor does not value each component (production unit) at the El Segundo generation station separately. For the base year assessment (1997), the Assessor enrolled the purchase price of the entire facility as the taxable value. When major components within the existing facility are removed and/or added, the Assessor may determine what contribution to the total value those assets provided, and amend the value appropriately. To date this has not been done, and we can only speculate as to whether or not it may be handled in that manner in the future.

97. Please provide the background for the statement that the project will generate $1 to $3 million in incremental tax revenues for the City of El Segundo.

Response No. 97: The project will add capital cost that will be subject to incremental property taxes, a portion of which will accrue to the City of El Segundo (see response to DR #96 above). Additionally, any increase in the consumption of natural gas will be subject to additional city franchise taxes, and any additional electricity sales will incur Utility Users Taxes, also assessed by the city.

TECHNICAL AREA: SOIL AND WATER

SUMMARY OF SOIL AND WATER RESOURCES DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, several issues have been the focus of multiple data requests and numerous other data requests have been issued in this subject area. Several issues have been asked and answered in both Soils and Water and in Biological Resources. These pertain to the sea water cooling system currently in operation at ESGS and being used with no significant modification for ESPR. Questions about the intake and outfall structures have been asked. Confirmation that no changes are being made to either portion of the system have been sought. The legal significance of this continuing use and the resultant scope of the impact and compliance inquiry made as part of deciding ESPR have been an important issue.

Other data requests have focused on groundwater, erosion, stormwater management, surface flows, and related topics. Many data requests have been answered to date and all remaining data requests are being answered on April 27, 2001.

ESP II continues to believe that ESPR, as submitted and accepted by the CEC and as further described during the discovery process, complies with all applicable Laws, Ordinances, Regulations, and Standards, and has no unmitigated significant impacts.

The following Data Requests have been received regarding Soil and Water:

Data Request	Applicant's Response Date	Source of Data Request	Page
112	April 18	CEC	SOIL-3
113	April 18	CEC	SOIL-4
114	April 18	CEC	SOIL-4
115	April 18	CEC	SOIL-4
116	April 18	CEC	SOIL-5
117	April 18	CEC	SOIL-5
118	April 18	CEC	SOIL-6
119	April 18	CEC	SOIL-6
120	April 18	CEC	SOIL-9
121	April 18	CEC	SOIL-9
122	April 18	CEC	SOIL-9
123	April 18	CEC	SOIL-10
124	April 18	CEC	SOIL-10
125	April 18	CEC	SOIL-11
126	April 18	CEC	SOIL-11
127	April 18	CEC	SOIL-12
128	April 18	CEC	SOIL-12
129	April 18	CEC	SOIL-12
130	April 18	CEC	SOIL-13
131	April 18	CEC	SOIL-14
CCC-2	April 18	CCC	SOIL-15
CCC-3	April 18	CCC	SOIL-15
CCC-8	April 18	CCC	SOIL-15
CCC-9	April 18	CCC	SOIL-16
CCC-16	April 18	CCC	SOIL-16
CCC-24	April 18	CCC	SOIL-16

TECHNICAL AREA: SOILS AND WATER RESOURCES
AUTHOR: TIM LANDIS, JOE CREA, DOMINIQUE BROCARD

BACKGROUND

The maximum waste heat rejection rate for the current power plant is variously characterized as 119,820 Million BTU/min (AFC, p.5.5-8) and 119,820 MMBtu/day (AFC, p. 5.5-16).

DATA REQUEST

112. Please clarify the maximum heat rejection rate of the plant.

Response No. 112: Table 5.5-3 on AFC page 5.5-8 incorrectly states heat load at maximum capacity in units of *"Million BTU/min*." The correct units throughout this table should read *"MMBtu/day,"* as described on page 5.5-16.

Note that the unit expression "MMBtu/day" (as the heat rejection rate currently appears on page 5.5-16) is the same as "Million Btu/day" as expressed in Table 5.5-3.

BACKGROUND

The cooling water flowrate and temperature rise for the proposed project will remain essentially the same as those of the existing power plant. Therefore, the thermal plume will remain the same as that of the existing plant (when at full load). The AFC states that the ocean surface area with a temperature rise of 1^0F or more is 30 to 40 acres (p.5.5-38), with a more or less circular shape. Further, the AFC states that the temperature rise falls below 4^oF within less than 1,000 ft from the discharge point, thereby complying with the California Thermal Plan. This characterization, however, is based on the assumption that the temperature rise is zero at a point approximately 1,500 ft southwest of the outfall (Thermal Effect Study, 1973, AFC Appendix H, Attachment 6, p. 11), and this assumption is not realistic.

An estimate of the thermal plume size can be made using the type of heat balance analysis mentioned in the Mixing Zone Analysis (AFC, Appendix H, Attachment 14). Assuming a radial temperature distribution of gaussian shape, one finds the 1^oF temperature rise isotherm to have an area of about 3,000 acres, and the 4^oF temperature rise to persist 2,500 to 3,000 ft from the discharge point.

The thermal monitoring data can also be used to develop an estimate of the thermal plume. For example, data are provided from a survey conducted on February 24, 1999 (AFC, p. 5.5-19). Using station RW 4, located about 5,000 ft from the outfall, as

background gives a temperature rise of 0.3°F at station RW 3, located 2,000 ft from the discharge. At the time of the survey, the plant was running at about 7% capacity. Prorating the temperature rise to full capacity gives a temperature rise of 4.5°F at RW 3, which is consistent with the results presented in the previous paragraph.

DATA REQUEST

113. Please provide a realistic characterization of the thermal plume, in terms of temperature rise isotherms over natural temperatures. Because the closest monitoring station is about 2,000 ft from the discharge, and the other stations are even farther away, mathematical modeling, or a reinterpretation of the 1973 thermal survey will be needed.

Response No. 113: This information will be provided as a part of the Applicant's responses to Data Requests 135-152 related to soil and water resources. These responses will be provided on or before April 27, 2001.

114. Please provide a revised estimate of the distance needed for the temperature rise to reach 4°F.

Response No. 114: This information will be provided as a part of the Applicant's responses to Data Requests 135-152 related to soil and water resources. These responses will be provided on or before April 27, 2001.

BACKGROUND

Based on the above, it is questionable whether the existing outfall meets the requirement of the California Thermal Plan.

APPLICANT'S CLARIFICATION OF BACKGROUND

The data from the Thermal Effects Study and the mixing zone analysis of the thermal discharges from the ESGS, which was performed using the CORMIX and PLUMES models developed by the USEPA assuming maximum operations of both the ESPR and Units 3 and 4, demonstrate that the existing and proposed discharge meets the requirements of the Thermal Plan.

DATA REQUEST

115. Provide a discussion of alternate outfall configurations, such as multiport diffusers, which would meet the Thermal Plan.

Response No. 115: This information will be provided as a part of the Applicant's responses to Data Requests 135-152 related to soil and water resources. These responses will be provided on or before April 27, 2001.

BACKGROUND

The statement is made in the AFC that "*considerable cold water is entrained by the rising water is evident from the diameter of the surface manifestations and from their temperatures, which may be only 5^{o}F above natural"* (pp 5.5-16, 5.6-53). The source is given as the Thermal Effects Study (Benson 1973 - AFC Appendix H, Attachment 2) where the same statement is made. However, it is not clear what the basis for this statement is. At the same time, the Mixing Zone Analysis (AFC Appendix H, Attachment 14) indicates a centerline dilution at the surface of 1.0, i.e. no dilution, and an average dilution of up to 1.7. Thus, according to the Mixing Zone Analysis the temperature rise at the center of the boil would be about 20^{o}F and the average temperature rise in the boil would be 12^{o}F.

DATA REQUEST

116. Please provide basis for statement that "*considerable cold water is entrained by the rising water that is evident from the diameter of the surface manifestations and from their temperatures, which may be only 5^{o}F above natural",* or provide corrected information on temperature rises in the area where the thermal plume impinges on the water surface.

Response No. 116: This information will be provided as a part of the Applicant's responses to Data Requests 135-152 related to soil and water resources. These responses will be provided on or before April 27, 2001.

BACKGROUND

The AFC states that *"the system uses velocity cap proposed by the Federal Government as a best available technology for minimizing the impact of water cooling systems on marine resources*." (AFC, p. 4-22)

DATA REQUEST

117. Please provide a reference for the Federal Government's designation of the velocity cap as a best available technology (BAT).

Response No. 117: As described on pages 5.5-33 and 5.5-34 of the AFC, EPA has identified in their draft regulations for new facilities that velocity caps

are a "fish diversion and avoidance system." The EPA considers diversion avoidance systems as one of four categories of appropriate means to minimize adverse environmental impacts. Thus, even though the intake structure will be an "existing" facility, this existing intake structure can meet requirements proposed by EPA for new structures. Please refer to the draft EPA regulations under Clean Water Act Section 316(b) for new facilities.

BACKGROUND

The AFC states that *"although the intake structure will be for an "existing" facility, it appears that the existing intake structure meets the proposed requirements to reduce impingement of aquatic organisms for a "new" facility*" (AFC, p. 4.5-34). However, one of the requirements of the proposed EPA rule on cooling water intake structures is that the intake velocity should be less than 0.5 ft/s. This velocity is exceeded by the current intake.

DATA REQUEST

118. Please provide an assessment of alternative cooling water intake designs that would meet the proposed EPA rule.

Response No. 118: This information will be provided as a part of the Applicant's responses to Data Requests 135-152 related to soil and water resources. These responses will be provided on or before April 27, 2001.

BACKGROUND

Most of the fish impingement appears to occur in conjunction with the heat treatment of the cooling water intake tunnels.

DATA REQUEST

119. Please provide an assessment of alternative means of controlling biofouling in the intake tunnels.

The following discussion is provided regarding the control of biofouling in the intake tunnel. This discussion was provided previously as a part of the Applicant's response to Data Request No. 83.

Response No. 119: The heat treat process is considered to be the BTA to keep the cooling water system free from fouling. The heat treat process is used to remove fouling organisms from the El Segundo Generating Station (ESGS) cooling water system. The heat treat process consists of recycling heated cooling water from the steam surface condenser outlet back to the cooling water intake and sending it through the cooling water system again. This serves to heat the cooling water to a level that removes any biological growth that has accumulated on the cooling water system piping and the tube side of the steam surface condenser. The heat treat process currently is only performed once every six weeks to remove fouling organisms.

Chlorination is used in conjunction with heat treatment to remove biological growth from the condensers under a variance issued by the Los Angeles Regional Water Quality Control Board. This variance was approved by the State Water Resources Control Board and USEPA Region IX. A copy of the variance is included as Attachment H-16, in Volume III of the AFC. Chlorination is discussed in more detail in Section 5.5.1.1.3. One alternative to heat treatment is a more intense chlorination treatment. This alternative was not considered as it would not be consistent with the requirements of the variance.

Another alternative to the use of the heat treat process is the use of a condenser tube cleaning system (CTCS) in conjunction with a debris filtering system to remove bio-fouling organisms. The CTCS in conjunction with the debris filtering system would serve to keep the steam surface condenser un-fouled but would not provide any means of keeping the cooling water pipes upstream and downstream of the condenser from becoming fouled. The CTCS operates by injecting sponge-rubber balls into the cooling water piping immediately upstream of the steam surface condenser. The sponge-rubber balls are slightly larger diameter than the internal diameter of the condenser tubes and act to scour any bio-growth from the condenser tube walls. Upon exiting the condenser, the balls would be collected by a strainer and recycled through the condenser. The debris filter would be located upstream of the CTCS ball injection to the condenser. It would serve to capture any debris and/or marine organisms that passed through the intake pre-screening systems. The debris filter would then backwash the captured debris and marine organisms to the discharge cooling water piping downstream of the CTCS ball collection strainers.

While the CTCS and debris filtering system would keep the condenser free of fouling organisms, they will not ensure that the cooling water piping upstream and downstream of the condenser remains free from

bio-fouling. The CTCS will only maintain the cleanliness of the condenser and keep it free of fouling organisms.

As reflected in Table 83-1, the total numbers of the identified species of interest impinged during heat treatment at the ESGS during 1997, 1998 and 1999 were not significant. Most of the fish impinged at the ESGS were impinged during heat treatment and originated from populations living in the intake forebay. Therefore it is concluded that the ESGS does not provide a significant contribution to the cumulative impacts, if any, on the identified species of concern. Additional detail regarding the biological consequences of heat treatment of the cooling water system at the ESGS can be found in Section 5.6.2.1.3 of the AFC.

TABLE 83-1
NUMBER OF INDIVIDUALS OF SELECTED SPECIES IMPINGED DURING HEAT TREATMENT - 1997 – 1999

Species (Latin Name)	Unit 1 & 2 Heat	Unit 3 & 4 Heat	Commercial[1] (lbs) 1999	Sport[2] 1999
Atractoscion nobilis	0	36	246,871	11,512
Stereolepis gigas	0	1	0	0
Paralichthys californicus	0	7	1,327,233	9,285
Panulirus interruptus	14	61	489,254	N.A.
Sebastes paucispinus[3]	0	0	6,456,012	495,873

1 1999 State of California fresh water and commercial landings.
2 1999 Sport fishing take in the Southern California Bight. Numbers represent commercial passenger fishing fleet. Does not include individual recreational take.
3 Includes all Rockfish.
N.A. Data not available.

BACKGROUND

To evaluate the affected environment and potential impacts from storm water runoff, it is necessary to identify run on and run off quantities and quality of the ESPR site and associated facilities. The ESPR site is mostly contained in the current ESGS site, which would represent the current runoff conditions. It is difficult to identify any potential ESPR impacts from stormwater runoff due to the mix of existing and planned runoff discussions in the AFC. In order to evaluate the impacts related to stormwater and erosion/sedimentation, Staff has requested a draft Stormwater Pollution Prevention Plan (SWPPP) for previous power plant projects. Stormwater and erosion/sediment control plans are components of the SWPPP. These plans are crucial to evaluate impacts related to ESPR stormwater quantity and quality. A separate draft demolition and construction plan is also needed as part of the SWPPP.

DATA REQUEST

120. Please provide the pre- and post-discharge for the 100-year frequency and 24-hour duration runoff event. Provide supporting data regarding the routing of off- and on-site runoff during these runoff events.

Response No. 120: This information will be provided as a part of the Applicant's response to Data Request 142, which requests similar information but modifies the scope of the request; therefore, the pending response will address this Data Request as well. This response will be provided on or before April 27, 2001.

121. Please provide the location of Discharge structure No. 002 on the mapping so Staff can evaluate the entire existing and proposed drainage routes for discharge capacity.

Response No. 121: This information is provided as Attachment 19.

122. Provide a draft stormwater and an erosion/sediment control plan for the facility and associated linear facilities that includes the following:

- Map drawings of 1'=100' or less that depict existing and proposed topography (contours) with labeled elevation numbers, structures, facilities, staging areas, and soil stockpile areas on the drawings (both on site and off site)
- Best Management Practices and a construction sequence on the drawings
- A complete mapping symbols legend on the drawings
- On site stormwater calculations in the narrative
- Address procedures that used to handle potential construction runoff impacts.
- Maintenance and monitoring protocol for erosion, stormwater runoff control and stabilization procedures.

Response No. 122: This information will be provided as a part of the Applicant's response to Data Request 144, which requests similar information but modifies the scope of the request; therefore, the pending response will address this Data Request as well. This response will be provided on or before April 27, 2001.

BACKGROUND

The AFC water resource section discussions rely heavily on the current and future requirements of the NPDES and associated permits. In order to assess how the potential water resource impacts are going to be mitigated, please furnish data and analysis to show how these conceptual permit conditions will be addressed. For example, on page 5.5-2 there is a bullet that is one of a list of additional key characteristics that the ESPR team has developed which states "*Extensive pre-submittal consultation with the following agencies or city entities."* One of the key regulatory agencies will be the Los Angeles RWQCB.

DATA REQUEST

123. Provide a draft hazardous materials storage and disposal plan that includes spill prevention and containment measures. Provide draft work plan needs that addresses the handling and disposal of contaminated sediments/groundwater.

Response No. 123: This information will be provided as a part of the Applicant's response to Data Request 145, which requests similar information but modifies the scope of the request; therefore, the pending response will address this Data Request as well. This response will be provided on or before April 27, 2001.

BACKGROUND

The AFC mentions that major cut and fill operations are not anticipated. Staff has requested conceptual volumes of cut and fill for previous power plants. The volume of cut versus fill will allow Staff to analyze grading impacts and to determine impacts related to the handling and/or disposal of excess fill.

DATA REQUEST

124. Please provide a conceptual volume of cut versus fill for grading and as excess spoil material.

Response No. 124: This information will be provided as a part of the Applicant's response to Data Request 146, which requests similar information but modifies the scope of the request; therefore, the pending response will address this Data Request as well. This response will be provided on or before April 27, 2001.

125. Please list any local RWQCB water resource concerns that were the result of these pre-submittal consultations and how they will be met by the AFC.

Response No. 125: During informal pre-submittal consultations with the RWQCB staff, no concerns were expressed regarding the construction of the ESPR project. Concerns expressed were related to potential increases in annual volumes of water circulated and BTU loading resulting from increased utilization of the once-through cooling system by the ESPR Project. Project staff noted that, as the once-through circulating system would not be modified, the maximum daily volume of water circulated would not be increased. In addition, the ESPR project would be designed to conform to the thermal discharge limitations specified in the ESGS NPDES permit. These concerns are addressed in more detail in Sections 5.5 and 5.6 of the AFC and rely on capacity utilization data from 1999 (see Table 5.5-3). It should be noted that capacity utilization data for Units 1 and 2 from 1999 were referenced in our discussions with the RWQCB staff. However, except during maintenance, Units 1 and 2 are currently utilized at full capacity and are projected to continue to be utilized at full capacity for the foreseeable future. Hence, the volume of once-through cooling water circulated is not expected to increase over now current conditions. Therefore, there will be no impacts over current conditions with the implementation of the ESPR.

BACKGROUND

A new, amended, or revised NPDES permit will be required for the project. A letter to the LARWQCB is included in ACF Appendix H asking for a determination of the projects status as new a or existing discharge .

APPLICANT'S CLARIFICATION OF BACKGROUND

A new/amended/revised NPDES permit will not be needed for the implementation of the ESPR Project. The only material change to the discharge from the ESGS resulting from the ESPR project will be the elimination of the treated sanitary waste stream. This will be addressed by an administrative notification to the Los Angeles Regional Water Quality Control Board. Otherwise, the ESGS will continue to operate under the existing NPDES permit issued on June 29, 2000.

DATA REQUEST

126. Provide a copy of the NPDES permit application/Report of Waste Discharge submitted to the LARWQCB requesting a new/amended/revised NPDES permit for the project.

Response No. 126: An application as a new or amended NPDES permit will not be needed. A letter dated December 13, 2000 requesting verification of the "existing discharge" classification of the thermal discharge with the implementation of the ESPR Project was submitted to the Los Angeles Regional Water Quality Control Board. In response to a question from James Reed, CEC Project Manager for the ESPR Project, Mark Pumford of the Los Angeles Regional Water Quality Control Board stated that a determination that this will be classified as an "existing discharge" is likely. Informal communications with Mark Pumford indicates that a formal reply for this determination is imminent. A copy of the NPDES permit is provided in Appendix H-10 of the AFC.

127. Provide copies for all correspondence transmitted to, or received from the LARWQCB related to the new permit. Provide this information on an on-going basis.

Response No. 127: A copy of the Applicant's December 13, 2000 letter to the LARWQCB requesting a determination of the discharge as "existing" under the Thermal Plan is included in Appendix H-9 of the AFC. The Applicant will forward copies of any further correspondence with the LARWQCB regarding the ESGS to the CEC.

128. Provide an estimate of when the draft NPDES permit will be available, and a copy of the draft NPDES permit when it is available.

Response No. 128: The ESGS will continue to operate under the requirements of NPDES No. CA0001147 following implementation of the ESPR Project. A copy of this NPDES permit is provided in Appendix H-10 of the AFC. For this reason, there will be no draft NPDES permit.

129. Provide a copy of the recently renewed NPDES permit for the existing project (NPDES Number CA0001147).

Response No. 129: A copy of NPDES No. CA0001147 is provided in Appendix H-10 of the AFC filed in December 2000.

BACKGROUND

The project intends to use potable water supplied by the City of El Segundo for not only potable uses, but also for plant and equipment drains, evaporative cooler makeup and quench water needs (AFC sec 5.5.2.1.2). The water supply needs for

these purposes will apparently increase form 49,940 gpd to 93,000 gpd for a net increase of 43,060 gpd.

The existing project uses reclaimed water provided by the West Basin Municipal Water District. The AFC (sec 5.5.2.1.2) does not provide adequate discussion of the potential for use of additional reclaimed water in place of potable water for the uses described above.

APPLICANT'S CLARIFICATION OF BACKGROUND

The amount of potable water utilized is reflective of the degree of capacity utilization. The AFC assumes capacity utilization for Units 1 and 2 based on 1999 operational data during which these units realized limited capacity utilization. In addition, the AFC projected full utilization of the ESPR Project (worst case). The increase in water supply needs reflects this greater capacity utilization over the 1999 capacity utilization. However, during the most recent period of record (April 2000 through March 2001) the capacities of Units 1 and 2 have been more fully utilized. During this period water usage has increased from 179,938 gpd in 1999 to 242,787 gpd. This is due in large part to increased utilization of Units 1 and 2 and is significantly greater than the potable water demand of 222,998 gpd projected with full utilization of the ESPR Project. It is anticipated that this increased level of capacity utilization of Units 1 and 2 and the associated potable water usage will continue for the foreseeable future. Based on this data, the ESPR Project will result in a net reduction in potable water demand over current conditions.

DATA REQUEST

130. Discuss in detail the availability of additional reclaimed water from WBMWD for these purposes, and how this water can used to mitigate the increase in potable water use of 43,060 gpd.

Response No. 130: The ESPR Project will result in a net reduction in potable water demand over current conditions. The potable water usage is based upon 15 people being stationed on site for all units around the clock. The assumed potable water usage for each person per day is 50 gallons. Other uses of potable water from the City of El Segundo (Metropolitan Water District of Southern California) as shown in Table 3.4-1 include plant and equipment drains, CTG evaporative cooler makeup, and quench water for the HRSG blowdown. Potable water was selected for use in these applications because the high purity reclaim water from the West Basin Municipal Water District

was considered to be too aggressive (no hardness or alkalinity) for carbon steel.

BACKGROUND

The project intends to meet its water supply requirement using several different sources. The City of El Segundo will be providing potable water to the project, and the West Basin Municipal Water District will be provide reclaimed water. Will serve letters from the suppliers of both the potable and reclaimed water are necessary to confirm that this water is actually available to the project. Since the City of Manhattan Beach has been identified as a backup source of potable water form the project (AFC sec 3.4.7), a will serve letter should be requested for this source also.

DATA REQUEST

131. Provide will serve letter for all sources of water for the project. These letters should state that the provider has adequate capacity and will provide the project with the required amount of water. They should include any conditions or restrictions on either providing the water or the use of the water.

Response No. 131: Water availability for the ESPR Project is summarized below.

City of El Segundo. Potable water is currently provided in excess of the ESPR Project demand (refer to discussion in response to Data Request 130). A will serve letter will not be needed for implementation of the ESPR Project as projected water demands are exceed by current demands.

West Basin Municipal Water District. A will serve letter from the WBMWD is provided as Attachment 20.

City of Manhattan Beach. The City of Manhattan Beach is a backup source for potable water, as identified in the AFC. For this reason, a will serve letter is not required for project certification.

Note to the Reader: Responses to Data Requests CCC-2, CCC-3, CCC-8, CCC-16, and CCC-24 are provided below. These Data Requests originated from the California Coastal Commission, and address water and biological resources issues.

CCC-2. There should be further evaluation of feasible alternatives available that would eliminate or reduce impacts to coastal resources. These alternatives include dry-cooling or combined wet/dry-cooling systems that would eliminate or reduce ocean water use and the associated impacts.

Response No. CCC-2: Alternatives to the once-through seawater cooling system for heat rejection at the ESPR Project include wet cooling towers and air-cooled condenser systems. These systems were evaluated and rejected for a number of reasons including space constraints at the ESGS, visual impacts and reduced efficiency. In addition, the once-through seawater cooling system does not result in significant impingement or entrainment impacts. Additional information regarding the evaluation of these alternatives is presented in Section 4.7.5.2 of the AFC.

CCC-3. After findings of this alternatives analysis are reviewed, compensatory mitigation may be required for any remaining unavoidable impacts. The Coastal Commission will include these mitigation evaluations as part of its review.

Response No. CCC-3: Because no significant impacts have been identified as resulting from ESPR's use of the existing, permitted seawater cooling system, ESP II has proposed no mitigation measures.

CCC-8. 3.3.3.1 Surface Water: The applicant should provide additional information describing the existing and proposed Best Management Practices for detaining or treating stormwater at the facility.

Response No. CCC-8: All storm water runoff from the ESGS is currently and will continue to be collected and treated by an oil water separator prior to discharge via Outfall Nos. 001 and 002. These discharges must be in conformance with the effluent limitations established by the Los Angeles Regional Water Quality Control Board in NPDES No. CA0001147. These effluent limitations are protective of the beneficial uses of the receiving waters. To maintain the operation of the oil water separators during construction, BMPs will be employed to remove sediment from storm water runoff prior to entry to the separators. In addition, the oil water separators are monitored for accumulation of sediment and sludges cleaned out as needed. Limited inventories of materials are stored indoors and where possible, maintenance activities are conducted indoors. Paved areas are cleaned regularly and spills are cleaned up promptly with absorbent materials that are maintained on site. Employees receive regular training in spill prevention and response; vehicles and equipment are maintained to prevent leaks; and, wastes are properly stored.

CCC-9. 3.9.2.3.1 Construction Activities: The AFC states that newly installed pipelines will be hydro tested. The applicant should provide additional information about any proposed detention, treatment, or discharge of the water used in this testing.

Response No. CCC-9: Hydrotesting water will be managed in compliance with the General NPDES Permit for discharge of hydrotest water issued by the – Los Angeles Regional Water Quality Control Board. An application for coverage under this general permit will be filed with the Los Angeles Regional Water Quality Control Board prior to construction of the pipelines requiring hydrotesting.

CCC-16. Section 5.4 Agriculture and Soils – The AFC provides some description of contaminated soils on the project site. Additional information should be provided regarding BMPs that will be implemented to address soil contamination (e.g., containment methods, treatment, prevention of contaminated runoff, etc.).

Response No. CCC-16: The Applicant anticipates that contaminated soils will be encountered during site preparation and construction. Accordingly, the Applicant has prepared a draft Waste Management Plan. This plan is provided as Appendix S of the AFC. The draft Waste Management Plan outlines BMPs that will be implemented for containment, treatment, prevention of contaminated runoff, etc., of contaminated soils that will likely be encountered during site preparation and construction.

CCC-24. *Regarding water quality* – most, if not all, of the proposed projects would eventually discharge stormwater runoff into Santa Monica Bay. Stormwater BMPs generally do not provide adequate treatment to remove some of the contaminants causing impairment in Santa Monica Bay, thus, this proposed project when considered cumulatively with the others, could result in further water quality impairment.

Additional information should be provided regarding stormwater source control or treatment BMPs that could be instituted to avoid or reduce adverse water quality impacts of this and other proposed projects.

Response No. CCC-24: All storm water runoff from the ESGS is currently and will continue to be collected and treated by an oil water separator prior to discharge via Outfall Nos. 001 and 002. These discharges must be in conformance with the effluent limitations established by the Los Angeles Regional Water Quality Control Board in NPDES No. CA0001147. These effluent limitations are protective of the beneficial uses of the receiving waters.

TECHNICAL AREA: TRAFFIC AND TRANSPORTATION

SUMMARY OF TRAFFIC AND TRANSPORTATION DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, Traffic and Transportation has been the subject of several data requests. These requests have focused on the completeness of the data and analysis conducted for the AFC and have raised several specific new questions. ESP II has answered all data requests and assured interested parties that several concerns were addressed and will be part of the Traffic Management Plan for the project.

ESP II continues to believe that ESPR complies with all applicable Laws, Ordinances, Regulations, and Standards, and has no unmitigated significant impacts to Traffic and Transportation resources.

The following Data Requests have been received regarding Traffic and Transportation:

Data Request	Applicant's Response Date	Source of Data Request	Page
30	March 28	CEC	T&T-2
31	March 28	CEC	T&T-2
32	March 28	CEC	T&T-3
33	March 28	CEC	T&T-3
34	March 28	CEC	T&T-4
62	March 28	CEC	T&T-4
63	March 28	CEC	T&T-5
64	March 28	CEC	T&T-5
87	March 28	COMB	T&T-5
CCC-20	April 18	CCC	T&T-6
33s	April 18	CEC	T&T-7
62s	April 18	CEC	T&T-11

TECHNICAL AREA: TRAFFIC AND TRANSPORTATION
AUTHOR: JAMES FORE & LANCE PAGEL

BACKGROUND

The AFC states that shipments of hazardous material will occur during construction and once the plant is in operation. The AFC indicates that the use of trucks is required for hazardous materials transport.

DATA REQUEST

30. Please indicate what truck routes may be used for the delivery of hazardous material and identity any railroad crossing, sharp curves, schools, hospital, etc. along these routes.

Response No. 30: The truck route to be used for transport of hazardous materials would comprise Vista Del Mar Boulevard, Imperial Highway, and local freeways (I-105 and I-405). The majority of this route consists of freeways and major arterials with wide rights of way, rather than local roads. There are no known railroad crossings, sharp curves, hospitals, or other sensitive receptors along the proposed route, except for Imperial Avenue School located on Imperial Avenue between California Street and Main Street. The route would be identical to that currently used for existing plant operations, and would be acceptable under the City of El Segundo hazardous materials transport permit process.

BACKGROUND

The pipeline construction activities and associated lane closures will impact local traffic flow during construction.

DATA REQUEST

31. Please identify the Level of Serve (LOS) for those sections of the roadways impacted and the mitigation measures such as signage, detours, and flagman if required, etc. that will be taken to minimize the impact of construction.

Response No. 31: As discussed in response to Data Request 38, the final determination of the precise route has not been determined. The precise route, including how and where the lines traverse Vista del Mar and other surface streets, will trigger an analysis of potential impacts and determination of appropriate mitigation measures.

It is recommended that pipeline construction be limited to non-peak hours along Vista Del Mar. See Response No. 32 for more discussion of traffic control plans that will be developed for the pipeline construction.

32. Please identify the impact that pipeline construction may have on local business and on street parking and mitigation measures planned to minimize the impact.

Response No. 32: As discussed in response to Data Request 38, the final determination of the precise route has not been determined. The precise route, including how and where the lines traverses Vista del Mar and other surface streets, will trigger an analysis of potential impacts and determination of appropriate mitigation measures.

Pipeline construction could result in short-term, temporary disruption to local businesses; however, impacts will be mitigated through strategies to be developed as part of the project's Traffic Control Plan (proposed under Mitigation Measure TRANS-4). This plan will be reviewed and approved by appropriate agencies prior to initiating the work. The Plan will include specific measures to address placement of traffic control devices, construction work hours, emergency access, temporary travel lane closures, and parking. Driveway access to local businesses will be maintained throughout construction, and emergency service providers, will be contacted prior to construction to ensure that adequate police and fire access is maintained.

BACKGROUND

The AFC indicates that many of the intersections that will be impacted by construction activity are operating at a LOS of F.

DATA REQUEST

33. Please indicate what measures the project will take to insure that the LOS for this intersection will not be adversely impacted.

Response No. 33: Table 5.11-1 of the AFC identifies the following intersections as currently operating at LOS F:

- Sepulveda Boulevard/El Segundo Boulevard (PM peak hour)
- Vista Del Mar Boulevard/Rosecrans Avenue (AM peak hour)

- Sepulveda Boulevard/Rosecrans Avenue (AM and PM peak hour)
- Aviation Boulevard/Rosecrans Avenue (AM and PM peak hour), and
- Sepulveda Boulevard/Imperial Highway (PM peak hour).

Table 5.11-2 of the AFC identifies existing ADT along these roadways as ranging from about 19,400 to 53,600. As a worst-case scenario, assuming that all construction workers (422) during the peak period are distributed to the roadway with the lightest ADT (19,400), the project would still contribute less than a 2 percent increase in traffic during the peak period. This would not be considered to be a significant traffic impact.

BACKGROUND

During construction of the project, truck deliveries of material and equipment will be required. The AFC indicates that during the sixth month these deliveries will peak at 29 deliveries per day.

DATA REQUEST

34. Please indicate the timing of the deliveries during the day and the current truck to car ratio for the truck routes.

Response No. 34: Deliveries would be spread throughout each workday. Given a peak (month 6) of 29 deliveries per day (or about 2-3 trucks per hour), no measurable traffic impacts are anticipated to local roadways. Based on visual observation (no known written data is available), the current truck to car ratio for the truck routes is estimated at about 5 percent.

62. The AFC should provide a detailed analysis of construction traffic safety issues at the entrance to the project on Vista Del Mar.

Response No. 62: As mentioned in Response No. 32, a detailed traffic control plan will be developed for the various construction elements. Workers will be bussed to the site and will have minimal impact since the number of busses during the peak traffic hours is anticipated to be eight entering and eight exiting. As mentioned in Response No. 34, only 2 or 3 truck deliveries are anticipated per hour. When heavy or oversized vehicles and/or equipment must enter the site, they must have procured a permit from the local agency(s) to ensure the safe transport of the vehicles/equipment. It is not anticipated that a temporary traffic signal would be required. If the collective decision is to install a temporary

signal, the signal should be actuated type, only affecting free-flow on Vista Del Mar when necessary for vehicles to enter or exit the project site.

63. The AFC should include additional discussion about the extent of construction impacts related to the construction of the two proposed water pipelines in the City of El Segundo.

Response No. 63: As discussed in response to Data Request 38, the final determination of the precise route has not been determined. The precise route, including how and where the lines traverse Vista del Mar and other surface streets, will trigger an analysis of potential impacts and determination of appropriate mitigation measures.

It is recommended that pipeline construction be limited to non-peak hours along Vista Del Mar. See Response No. 32 for more discussion of traffic control plans that will be developed for the pipeline construction.

64. The AFC should include an analysis of the traffic impacts from the construction activities associated with the demolition of the SCE oil storage tanks.

Response No. 64: The Applicant is in the process of acquiring the oil storage tank property from SCE. Demolition of the tanks will take place regardless of the outcome of the AFC process. Demolition of the tanks will be subject to the CEQA requirements, as administered by the City of El Segundo as lead agency. A full analysis of the impacts of demolition will occur as a part of the tank farm demolition CEQA process for the project approval.

Note to the Reader: Response to Data Requests 87 is provided below. This Data Request originated from the City of Manhattan Beach, and addresses traffic and transportation issues.

87. Please discuss whether any construction traffic will use 45th Street or any other Manhattan Beach streets for access to the plant. Please provide number of trips, types of traffic and schedules.

Response No. 87: The project will not use 45th Street for access for general construction, except for construction of the sanitary discharge line at the corner of 45th Street and The Strand. During general construction, the vast majority of traffic is anticipated to access the plant site via I-105, I-405,

Imperial Highway, and Vista Del Mar. A small percentage of construction traffic, commuting to and from the south, is anticipated to use major local thoroughfares traversing Manhattan Beach (such as Sepulveda Boulevard). Proposed Mitigation Measure TRANS-4 provides for a Traffic Control Plan which is designed to direct workers and deliveries to appropriate remote parking and staging locations, which would avoid City of Manhattan Beach streets.

BACKGROUND

5.11.2.1 Construction-Related Impacts: the AFC describes several options available for construction worker parking, including two areas used by the public to access coastal resources. Use of these sites (public parking associated with the County/State Beaches along Vista Del Mar or the Marina del Ray Boat Launch) could limit public access to the beach and would likely require mitigation measures in order to be consistent with policies of the Coastal Act.

DATA REQUEST

CCC-20. We request that, as part of this review, the applicant and Energy Commission determine which off-site parking areas will be used for construction-related work. If public parking areas are to be used, mitigation measures in the form of replacement parking should be included as a condition of project approval. We also request additional information be provided regarding proposed alternatives to the use of public parking areas (e.g., the applicant provides mandatory shuttles from offsite locations for workers, vanpools, etc.).

Response No. CCC-20: The AFC identifies several potential offsite worker parking locations. Public parking areas under consideration include several beach parking lots north of the plant, as well as the Boat Launch lot in Marina del Rey. These lots are owned and operated by the County of Los Angeles Department of Beaches and Harbors, in coordination with the City of Los Angeles, and California Department of Parks and Recreation.

The Applicant is working with the County of Los Angeles, as operator of the lots, to develop a coordinated approach to using one or more of the beach parking areas. The County of Los Angeles respects its obligations to give priority to public beach access and has adopted planning procedures to process requests for longer term usage of beach lots. The Applicant has identified priority parking locations based on proximity to the project site. These are listed below. The County will

consider use of these sites as needed by the ESPR Project scheduling demands as long as the requested parking does not compromise access to the beach. This policy will necessitate use of several parking lots to accommodate both the public usage patterns throughout the year and the schedule of workers required by the ESPR project. The Applicant plans to provide shuttle services between the remote lots and the project site.

In general, the parking areas have been identified in the following order of priority:

- Hyperion
- Grand Avenue
- Dockweiler
- Marina del Rey (back-up location).

Note to the reader: The following traffic and transportation Data Requests are supplemental to previous data requests in this issue area.

Supplement to No. 33. Revise Table 5.11-1 to include percent change at each intersection (i.e., identify existing vs. future conditions).

Supplemental Response No. 33: Truck traffic was included in the analysis performed to date. Construction truck traffic used in the analysis is based on information provided in Section 3.8 and 3.9 of the AFC. Most traffic impacts are due to the number of employees.

Table 5.11-1 is updated to show the increase in traffic volumes (both number and percentage) over existing conditions for the three employee parking lot scenarios. Each scenario is summarized in a separate table as noted below.

Fed Ex Site

	AM Peak Hour			PM Peak Hour		
Intersection	**Total Volume**	**Difference**	**%Difference**	**Total Volume**	**Difference**	**%Difference**
Vista Del Mar/Grand Ave	3040	42	1.40%	2636	3	0.11%
Sepulveda Blvd/El Segundo Blvd.	6204	53	0.86%	7387	53	0.72%
Vista Del Mar/Imperial Highway	2945	42	1.45%	2552	42	1.67%
Pershing Drive/Imperial Highway	3126	42	1.36%	2462	42	1.74%
Vista Del Mar/45th Street	2735	5	0.18%	2533	5	0.20%
Vista Del Mar/Rosecrans Avenue	2777	5	0.18%	3036	5	0.16%
Sepulveda Blvd/ Rosecarns Avenue	7180	53	0.74%	7828	53	0.68%
Aviation Blvd/El Segundo Blvd	5437	272	5.27%	5059	272	5.68%
Aviation Blvd/Rosecarns Avenue	6490	89	1.39%	6702	89	1.35%
Sepulveda Blvd/Imperial Highway	8468	77	0.92%	10189	77	0.76%

LAX-Pershing Site

	AM Peak Hour			PM Peak Hour		
Intersection	**Total Volume**	**Difference**	**%Difference**	**Total Volume**	**Difference**	**%Difference**
Vista Del Mar/Grand Avenue	3106	108	3.60%	2733	100	3.80%
Sepulveda Blvd./El Segundo Blvd.	6186	35	0.57%	7369	35	0.48%
Vista Del Mar/Imperial Highway	3087	184	6.34%	2694	184	7.33%
Pershing Drive/Imperial Highway	3522	438	14.20%	2850	430	17.77%
Vista Del Mar/45th Street	2830	100	3.66%	2648	120	4.75%
Vista Del Mar/Rosecrans Avenue	2856	84	3.03%	3118	87	2.87%
Sepulveda Blvd./ Rosecarns Ave.	7211	84	1.18%	7859	84	1.08%
Aviation Blvd./El Segundo Blvd.	5200	35	0.68%	4822	35	0.73%
Aviation Blvd./Rosecarns Avenue	6458	57	0.89%	6670	57	0.86%
Sepulveda Blvd./Imperial Highway	8625	234	2.79%	10603	491	4.86%

Beach Site

		AM Peak Hour			PM Peak Hour	
Intersection	**Total Volume**	**Difference**	**%Difference**	**Total Volume**	**Difference**	**%Difference**
Vista Del Mar/Grand Avenue	3188	190	6.34%	2732	99	3.76%
Sepulveda Blvd./El Segundo Blvd.	6186	35	0.57%	7369	35	0.48%
Vista Del Mar/Imperial Highway	3133	230	7.92%	2740	230	9.16%
Pershing Drive/Imperial Highway	3230	146	4.73%	2566	146	6.03%
Vista Del Mar/45th Street	2980	250	9.16%	2758	230	9.10%
Vista Del Mar/Rosecrans Avenue	2919	147	5.30%	3178	147	4.85%
Sepulveda Blvd./ Rosecarns Avenue	7239	112	1.57%	7887	112	1.44%
AviationBlvd./El SegundoBlvd.	5200	35	0.68%	4822	35	0.73%
AviationBlvd./Rosecarns Avenue	6477	76	1.19%	6689	76	1.15%
SepulvedaBlvd./Imperial Highway	8537	146	1.74%	10258	146	1.44%

Intersection analysis of Vista del Mar and the plant entrance.

The intersection of Vista Del Mar and the Plant entrance was analyzed under two scenarios:

- Tank farm removal plus demolition of Unit 1 and Unit 2
- Heaviest construction truck delivery month

For both scenarios, traffic data from peak hour traffic counts at Vista Del Mar with Rosecrans Avenue and Grand Avenue were used to determine volumes on Vista Del Mar. Morning and evening peak traffic hours were calculated to show "worst case." The intersection was analyzed as unsignalized.

For the demolition scenario, truck and employee data was available from the Environmental Assessment of the Southern California Edison El Segundo Fuel Oil Storage Tank Removal Project, prepared by SCE in 2000. Similar data was not available for the removal of Units 1 and 2; therefore the following data and assumptions were initially used for analysis:

- Tank farm truck activity: one in and one out during the peak hour. According to the EA, far less than one per hour will occur. All vehicles enter from, and exit to the north.

- Tank farm employees: 20 employees assumed to drive separately to the project site. Fifty percent enter from the north, 50 % from the south.

- Unit 1 & 2 trucks and employees are assumed to be similar to that of the tank farm.

To be conservative, and since the exact number of trucks is unknown, level of service analysis was run to determine at what point the westbound left (out of the site) would fail (LOS E). The westbound left was determined to be the critical movement since most trucks are heading to the north and they must cross the southbound Vista Del Mar traffic to join the northbound lanes.

The results of the analysis are summarized in the following table. The critical movements to the analysis are shown. The through capacity of Vista Del Mar is strained due to existing volumes. Essentially, a maximum of 14 trucks can make a left turn exit in the PM peak hour.

This is in addition to ten employee vehicles exiting. In reality, only one or two trucks are expected to exit. There is much more capacity in the morning rush hour since the southbound Vista Del Mar volumes in the AM are less than half of the PM volumes, thus making it much easier for trucks to find acceptable gaps in the traffic flow. The proximity of the signalized intersections also provide gaps in traffic.

LOS Summary – Tank Demolition

Intersection Movement	AM Peak Hour LOS	PM Peak Hour LOS
Westbound (entrance) Left	C	D
Westbound (entrance) Right	B	B
Northbound Left	A	B

For the second scenario – construction - the maximum truck volume assumptions were:

- 29 truck deliveries per day (3 per hour)
- 10 heavy truck deliveries per day (1 per hour)
- 8 bus loads of workers entering and exiting each peak hour
- All trucks come from and exit to the north
- All buses come from and exit to the north.

The results of the analysis are summarized in the following table. The critical movements to the analysis are shown. The through capacity of Vista Del Mar is strained due to existing volumes. The proximity of the signalized intersections also provide gaps in traffic.

LOS Summary – Construction

Intersection Movement	AM Peak Hour LOS	PM Peak Hour LOS
Westbound (entrance) Left	C	D
Westbound (entrance) Right	B	B
Northbound Left	A	B

In all practicality, the situation with the most traffic entering and exiting the site will be during construction, not during demolition. Even during the month of highest volumes, the westbound left movement is still predicted to operate at LOS D. The analysis does not account for the probable gaps in Vista Del Mar traffic provided by adjacent traffic signals. These gaps will improve the ability for left turning vehicles to make their maneuver. It appears that no temporary traffic signal is required.

As stated in Section 5.11 of the AFC, if oversized loads or vehicles must use public roadways, they must conform to permit the requirements various regulations, including:

- California Vehicle Code Section 35780
- Streets and Highways Code Sections 117 and 6600-711
- 21 California Vehicle Code of Regulations 1411.1 to 1411.6
- City of El Segundo Municipal Code Chapter 10.20 Section 10.20.010

It is recommended that traffic at the entrance intersection be monitored to assure no negative impacts are occurring. Mitigation measures such as prohibiting trucks at certain hours, a temporary signal, active traffic control (flagmen), etc. could then be considered.

Supplement to No. 62. Update the previous response to Data Request 62 based on the supplemental response to Data Request 33. Update the safety discussion based on potential traffic safety impacts at the plant entrance.

Supplemental Response No. 62: An analysis of safety impacts at the plant entrance is provided in response to Supplemental Data Request 33, above. Specific safety features will be implemented in accordance with a Traffic Control Plan, to be developed in coordination with the City of El Segundo and City of Manhattan Beach prior to construction.

TECHNICAL AREA: TRANSMISSION LINE SAFETY & NUISANCE

SUMMARY OF TRANSMISSION LINE SAFETY AND NUISANCE DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, a data request was made regarding the location of the existing transmission lines and potential for these lines to interfere with radio or television reception. ESP II has answered this request and believes that ESPR complies with all applicable Laws, Ordinances, Regulations, and Standards, and has no unmitigated significant impacts regarding Transmission Line Safety and Nuisance.

The following Data Requests have been received regarding Transmission Line Safety & Nuisance:

Data Request	Applicant's Response Date	Source of Data Request	Page
74	March 28	COES	TLSN-2
75	March 28	COES	TLSN-2
76	March 28	COES	TLSN-3

TECHNICAL AREA: TRANSMISSION LINE SAFETY & NUISANCE
AUTHOR: CITY OF EL SEGUNDO

74. In the Transmission Line Safety and Nuisance section of the AFC there should be a figure showing the location of the transmission line lattice towers that would be replaced with tubular steel poles (page 5.18-2). It is not clear if the construction impact of this aspect of the project has been discussed in the AFC.

Response No. 74: Two lattice line towers will be replaced with three tubular steel generator lead poles. These existing towers are located on the plant property, as shown in Figure 3.3-1A. No towers outside of the plant site are planned for replacement.

Construction of the generator lead poles is described in Section 3.9 of the AFC. Impacts associated with installation of the new generator lead poles are considered in various sections of the AFC environmental analysis.

75. In the Transmission Line Safety and Nuisance section of the AFC, it is not clear which transmission lines would be impacted by increased magnetic fields due to the increased load on the lines. A figure showing the impacted lines and the properties within 200 feet of the lines that could experience computer interference should be included (Page 5.18-29). It is not clear if there are residential properties that would be impacted by the potential interference.

Response No. 75: The increased generation from the project could lead to increases in magnetic fields of up to 26 percent as described in Section 5.18 of the Application. This estimate is based on measurements taken along the existing overhead transmission line. These measurements were projected to account for factors such as the plant running at full load, the topography is even and the transmission lines have balanced currents. In this connection it should be recognized that the existing lines already carry currents that are at times equivalent to the currents due to project operation.

To the extent local increases in magnetic fields occur, computer interference may result within an area of approximately 200 feet from the centerline of the existing transmission route as described in the AFC. However, magnetic field strengths can vary widely with local structures, topography, and equipment orientation. Thus specific computer interference effects are difficult to project, though they are expected to be minor. Therefore, the Applicant has stipulated that if a resident's or business's computer is being impacted by magnetic fields from the transmission lines, and the complaints are substantiated, then

the project operator will mitigate any impacts as needed. Mitigating measures could include provision of magnetic shield enclosures, software programs, or replacement of cathode ray tube monitors with liquid crystal displays.

76. In the Transmission Line Safety and Nuisance section of the AFC, a study of the local radio and television signal strength should be prepared to determine if there could be any interference from the transmission lines on local radio and television reception (page 5.18-44).

Response No. 76: The existing overhead transmission line should not cause radio or TV interference in either dry or wet weather conditions due to corona noise based on field measurements and extensive computer modeling of transmission line noise. The approach taken in the application has been to estimate the potential incremental effects on interference from project operation. In this connection it should be recognized that the existing lines already carry currents that are at times equivalent to the currents due to project operation.

Because of extreme variations in local radio and TV signal strengths due to local structures, transmission operation, topography, and other factors, a study of existing signal strengths is not likely to provide useful information regarding the incremental interference impacts of project operation. Instead, the Applicant has agreed to stipulate that if any resident is impacted by radio or TV interference from the transmission lines, and if complaints are substantiated, then the project operator will mitigate any impacts as needed on a case-by-case basis. Mitigating measures could include transmission repairs; adjusting or modifying receivers; or, adjusting, repairing, replacing or adding antennas, antenna signal amplifiers, filters or lead-in cables. Please refer to Stipulation TSLN-2 in Section 5.18, page 5.18-48 of the AFC.

TECHNICAL AREA: TRANSMISSION SYSTEM ENGINEERING

SUMMARY OF TRANSMISSION SYSTEM ENGINEERING DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, several data requests were issued in the area of Transmission System Engineering. These data requests were answered. ESP II continues to believe that ESPR complies with all applicable Laws, Ordinances, Regulations, and Standards, and has no unmitigated significant impacts to the transmission system.

The following Data Requests have been received regarding Transmission System Engineering:

Data Request	Applicant's Response Date	Source of Data Request	Page
98	April 18	CEC	TSE-2
74s	April 18	CEC	TSE-2
75s	April 18	CEC	TSE-2

TECHNICAL AREA: TRANSMISSION SYSTEM ENGINEERING
AUTHOR: LINDA DAVIS

BACKGROUND

In the System Impact Study (January 15, 2001), the applicant identifies four base case power flow scenarios on which conclusions were based.

DATA REQUEST

98. Please provide the all-base case power flow scenarios in PSLF data format for CEC staff power flow analysis.

Response No. 98: The System Impact Study was performed by Southern California Edison (SCE), and ESP II does not possess the electronic format files used to conduct the analysis. SCE has informed ESP II that as a matter of company policy it does not release the data files in electronic format. SCE is responsible for analyzing interconnection requirements and impacts its system. CAL-ISO reviews SCE's analysis and provides comments which SCE then considers. ESP II is willing to provide all relevant files and information under its control that are necessary to analyze for LORS compliance.

Supplement to No. 74. As discussed at the March 28 public workshop, the new generator lead poles need to be identified on the plant layout drawings.

Supplemental Response No. 74: Figure Nos. 3.4-2A (Site Arrangement Plan) and 3.5-1A (Site Grading & Drainage Plan) are revised to show the location of new generator lead poles. These figures are provided as Attachment 19.

Supplement to No. 75. As discussed at the March 28 public workshop, the Applicant agreed to provide additional discussion and an accompanying map regarding potential interference from transmission lines in the project area, particularly along Rosecrans Avenue in Manhattan Beach.

Supplemental Response No. 75: A map indicating the 200-foot wide corridor along the existing transmission line route between the plant and Aviation Boulevard is provided as Attachment 21. Interference along this route at this time should be minimal because the nearest point for potential interference is approximately 200 feet from these lines. ESPR will not increase the maximum voltage or current that these lines currently carry at various times. For this reason, ESPR will not cause any interference impacts to the community across Rosecrans from the lines.

TECHNICAL AREA: VISUAL RESOURCES

SUMMARY OF VISUAL RESOURCES DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, numerous visual resources data requests have been issued and answered and visual resources has been an important issue to the community. ESP II has worked cooperatively with all agencies and individuals to provide new information, adjust existing information, and to offer to find project enhancements that would alleviate all local concerns.

The treatment of the Southern boundary of the ESGS site, along 45th street, has been the discussion point for meetings with residents and with agencies at workshops. ESP II continues to believe that ESPR complies with all applicable Laws, Ordinances, Regulations, and Standards, and has no unmitigated significant impacts. A particularly unique aspect of this project its the replacement nature. Because the new facility will be erected in place of and on top of the old Units 1 and 2, there is very little net change to the visual signature of the site. Regardless of legal necessity for project changes, however, ESP II sees the value in reasonably accommodating local concerns through project enhancements and looks forward to completing this cooperative resolution of issues and concerns.

The following Data Requests have been received regarding Visual Resources:

Data Request	Applicant's Response Date	Source of Data Request	Page
56	March 28	COES/COMB	VIS-2
57	March 28	COES/COMB	VIS-3
86	March 28	COMB	VIS-3
89	March 28	COMB	VIS-3
99	April 13	CEC	VIS-4
100	April 13	CEC	VIS-5
101	April 13	CEC	VIS-5
102	April 13	CEC	VIS-5
103	April 13	CEC	VIS-6
104	April 13	CEC	VIS-6
105	April 13	CEC	VIS-7
106	April 13	CEC	VIS-7
107	April 13	CEC	VIS-8
108	April 13	CEC	VIS-9
109	April 13	CEC	VIS-9
110	April 13	CEC	VIS-10
111	April 13	CEC	VIS-18
CCC-22	April 13	CCC	VIS-18

TECHNICAL AREA: VISUAL RESOURCES
AUTHOR: CITY OF EL SEGUNDO & CITY OF MANHATTAN BEACH

56. In the Visual Resources section of the AFC, photo simulations should be provided for the new plant looking at the site from directly east of the site on Vista Del Mar and directly west of the site from the beach (figure 5.13-2b). The photo simulations in the AFC are taken from quite a distance away from the project site and seem to underestimate the mass of the structures when close up to them.

Response No. 56: Due to the terrain of the surrounding property and the limited number of additional sensitive view locations beyond those already represented, the possibility of producing additional photo simulations from the immediate east and west is very limited. Key Observation Point Number 5, which was taken from Vista Del Mar is a representative observation point with a full line of sight for motorists. For further photo simulations from the west, Key Observation Point Number 7 has been added. KOP 7 and an analysis of the simulation methodology is provided as Attachment 18. This KOP analyzes all visual impacts from a point directly west of the project on Dockweiler State Beach. Photo simulations have been taken to represent the Key Observation Point before and after construction, as well as an assessment of project impacts.

Supplemental Response to Data Request No. 56

Attachment 19 provides the following figures:

- Figure 5.13-10a – Existing View from KOP 7 as discussed in Response to Data Request 56
- Figure 5.13-10b – Simulated View from KOP 7 as discussed in Response to Data Request 56
- Figure 5.13-10b – Simulated View from KOP 7, with a pointer to the generator lead pole as requested in the March 14, 2001 workshop
- Revised Figure 5.13-5b – Simulated View from KOP 2, with pointers to the generator lead poles as requested in the March 14, 2001 workshop.

57. In the Visual Resources section of the AFC, the photo simulations should include the new 95-foot tall generation lead poles.

Response No. 57: The photo simulations do in fact include the 95-foot tall generator lead poles. Figures 5.13-4b, 5.13-4c, 5.13-5b, and 5.13-6b illustrate the generator lead poles. The new generator lead poles will carry lines from the generator to the substation, and will be located in the same general location as the existing lattice towers. Unlike regular transmission towers, the generator lead poles are much smaller in mass and scale. Therefore, their visual impact is substantially reduced, with little to no impact.

Note to the Reader: Responses to Data Requests 86 and 89 are provided below. These Data Requests originated from the City of Manhattan Beach, and address visual resource issues.

86. Please provide a discussion and photo simulations of proposed improvements to the existing perimeter fencing, walls and landscaping adjacent to 45th Street in the City of Manhattan Beach.

Response No. 86: A full discussion and photo simulation of proposed improvements to the existing perimeter fencing, wall and landscaping adjacent to 45th Street in the City of Manhattan Beach would be speculative at this point, due to the need for focused community participation regarding this subject. It should be noted that the proposed improvements are not considered to represent a significant visual impact in consideration of the existing structures, but rather would enhance the views from surrounding areas. After the March 14 workshop, a Visual/Aesthetic workshop was scheduled for April 18.

89. Please provide before and after construction views from the south, in the city of Manhattan Beach, similar to the views from the north (Figures 5.13-4a and 5.13-4b).

Response No. 89: Key Observation Point 2 Figures 5.13-5a and 5.13-5b illustrate the project site with both before and after construction views from the south, adjacent to the City of Manhattan Beach. The optimal Key Observation Point is one that illustrates the viewshed with line of sight and the maximum number of viewers. This Key Observation Point takes these factors into account when selecting a viewpoint adjacent to the City of Manhattan Beach.

Note to the reader: The following Visual Resources data responses were docketed April 13 as a part of the Applicant's Noise and Visual Resources Data Responses. The text of the data responses is provided below. Attachments related to the Noise and Visual Resources Data Responses are available in the April 13 filing.

BACKGROUND

In Figures 3.4-1 and 3.4–2, major *functional* components of the proposed project are depicted, but the visible, external physical enclosures, which will ultimately determine the visual effects of the project, are not. Consequently staff was unable to clearly understand the footprints of the proposed, visually prominent enclosure structures, including the central steam turbine generator building, the HRSG enclosures and structural support, air inlets, and other major visible structures. Staff requires this information to assist in performing the visual analysis.

DATA REQUEST

99. Please provide a plan similar to Figure 3.5-1A (i.e., with topographic elevation layer) that illustrates the footprints of the major enclosure structures and other major project components. Please provide this file in CAD form as well as hard copy form.

Response No. 99: Figure 3.5-1A illustrates the existing footprints with a topographic elevation layer. There will not be any enclosures around the Heat Recovery Steam Generators or exhaust stacks. It is possible that the method of rendering the Key Observation Points might have created an inference that there were enclosures on the major component and that these enclosures required modification to Figure 3.5-1a. In order to eliminate this confusion, and also in response to other data requests, the Key Observation Points have all been revised to simulate the infrastructure surrounding the equipment. Please refer to Attachment 1 for revised Key Observation Point analysis, and Attachment 2 for revised Key Observation Point renderings.

BACKGROUND

Figure 3.4-3C provides a scaled north elevation of the proposed project. However, no similar west or east elevation was provided. Staff requires these to assist in performing visual analysis.

DATA REQUEST

100. Please provide scaled west and east elevations of the proposed project similar to that provided in Figure 3.4-3C for the north elevation. If the south elevation differs from the north elevation, please provide the south elevation as well.

Response No. 100: The requested drawings are provided as attachments. Please refer to Attachment 3 for Figure 3.4-3D, *Plant General Arrangement View Looking East*, and Figure 3.4-3E, *Plant General Arrangement View Looking South*, and Figure 3.4-3F, *Plant General Arrangement View Looking West*.

BACKGROUND

The existing plant represents a prominent existing adverse visual impact in the scenically sensitive coastal zone. The proposed project could potentially increase the apparent bulk, height and massing of the facility as seen from various sensitive viewpoints in comparison to the Unit 1 and 2 structures that it would replace, thus potentially intensifying this adverse influence on the scenic resources of the coastal zone. Applicant has proposed landscape screening and painting measures that address such concerns in part. However, additional visual mitigation measures, potentially including both architectural and landscape treatments, which would mitigate adverse visual impacts, help to improve conformance with local policies, and are acceptable to the affected communities, may be needed.

DATA REQUEST

101. Please provide a description in scaled plan form of opportunity sites for establishment of enhanced screening vegetation on or near all four boundaries of the project plant.

Response No. 101: The requested plan is provided as an attachment. Please refer to Attachment 4. A 10-foot wide landscaping opportunity exists on the northern property line, and on the southern property line from the northern border to the intake pipe. Additionally, there is a limited opportunity on the southern property line due to steep slope conditions and limited area.

102. Please provide a description in scaled plan form of constraints to establishment of screening vegetation on or near the power plant boundaries such as utilities, pipelines, etc.

Response No. 102: The requested plan is provided as an attachment. Please refer to Attachment 5. Landscape constraints exist along the eastern property line due to overhead transmission lines, the SCE Substation, generators, and steep slope conditions. On the western property line from the intake pipe to the southern property line, landscaping constraints are due to the existing fenceline and revetments, which will remain in place.

103. Please provide a scaled conceptual screening plan and architectural elevation views, including landscape and architectural elements as appropriate, that would contribute to substantial screening of the proposed plant from foreground views on Pacific Coast Highway (PCH) and adjacent beaches. Screening of the proposed plant from foreground locations on PCH, and of the proposed plant and associated tank farm in views from Dockweiler Beach to the north and northwest are of particular concern.

Response No. 103: Based on evaluation of ESPR's Visual Resources Impacts, no mitigation measures are required as ESPR will not have any significant unmitigated impacts to visual resources. This analysis is contained in the original AFC in the visual resources chapter as well as in the revised analysis of the Key Observation Points provided as Attachment 1. Data Response #101 and 102 provide Landscaping Opportunities and Constraints. In the spirit of community cooperation ESP II is working with the El Porto area residents to consider mutually agreeable project components that would satisfy the local community that ESPR not only has no significant impacts but actually provides overall enhancements to visual resources. In regards to the area along 45th Street, the Applicant is obtaining input from interested residents at a Noise and Visual Community Meeting on April 12th. A CEC Noise and Visual Workshop on April 18thwill also provide an informal forum to discuss potential enhancements. Attachment 6 provides a sample conceptual plans that was used at the Community meeting on April 12 to stimulate discussion and develop understanding.

104. Please provide a list of suitable tree and large shrub species that would, in the opinion of a qualified arborist familiar with local conditions, be the optimal choices for landscape screening on the project site per Data Request 6.

Response No. 104: After consultation with a terrestrial biologist and landscape architect familiar with the local area and El Segundo and Manhattan Beach Ordinances, there are no native species which would be optimal choices for screening. However, two non-native types were identified. The choices are Palm Trees and Myoporums, which both have an average height of 35 – 40 feet. The palm is hardy specie that has a high growth rate and is currently growing in areas surrounding the ESPR.

Myoporum is an evergreen shrub, which can grow into small trees. This specie is ideal to its ability to take full sun, has a high growth rate, and is fire retardant.

105. Please provide additional architectural screening treatment concepts, such as architecturally-designed or modified enclosures or other feasible techniques, for the proposed HRSGs and exhaust stacks, that would enhance their visual compatibility with the scenic coastal zone and reduce the industrial character of the more prominent structures.

Response No. 105: Because the use of enclosures to surround the Heat Recovery Steam Generator (HRSG) and stacks would substantially increase the mass and bulk of the structures, such enclosures are not acceptable to ESPR's goal to repower Units 1 and 2 of ESGS while staying in the existing environmental envelope of the facility. New KOP's are provided as well as new analysis. The new KOPS show increased piping and infrastructure detail. ESP II believes that this increased detail demonstrates a project that maintains the existing view shed character of the facility ensuring that there are no significant impacts to visual resources. Since mitigation is not needed, the addition of an enclosure, even if it did not add to the mass and bulk of the infrastructure would still not be a beneficial enhancement

106. Please provide simulations depicting the landscape and architectural screening concepts described above, from viewpoints described under Data Requests (12, 13), below. Landscaping should be depicted at an age of approximately 5 years after installation, and at maturity. Please provide five sets of 11' x 17" high quality color photocopies of the simulations that will reproduce a life-size viewing scale when viewed at a normal reading distance of approximately 18 inches.

Response No. 106: Based on evaluation of ESPR's Visual Resources Impacts, no mitigation measures are required as ESPR will not have any significant unmitigated impacts to visual resources. This analysis is contained in the original AFC in the visual resources chapter as well as in the revised analysis of the Key Observation Points provided as Attachment 1. In the spirit of community cooperation ESP II is working with the El Porto area residents to consider mutually agreeable project components that would satisfy the local community that ESPR into only has no significant impacts but actually provides overall enhancements to visual resources. Because no mitigation is required, no landscape and architectural screening concepts are required under the California Environmental Quality Act (CEQA) or the Warren-Alquist Act. ESP II understands and has stipulated to the standard CEC conditions for

visual resources which include conditions ensuring that applicants complete approval by the local responsible permitting authority for landscaping as required by local ordinances. Under standard CEC visual resource conditions the plans for such landscaping are submitted pursuant to the compliance period schedule, substantially before such landscaping work is done.

BACKGROUND

Aesthetic mitigation measures such as those requested in Data Requests 5 and 7 must ultimately be acceptable to the affected local communities and be found to comply with local plans and policies regarding visual resources of the coastal zone.

DATA REQUEST

107. In conjunction with the responses to Data Requests 5 and 7, please provide a proposal for a design development process involving the affected communities that would allow for community input into the design and encourage ultimate design consensus.

Response No. 107: As discussed in response to Data Requests 103 and 106 above, in the spirit of community cooperation, ESP II is working with the El Porto area residents to consider mutually agreeable project components that would satisfy the local community that ESPR not only has no significant impacts but actually provides overall enhancements to visual resources. Resident representatives of the El Porto neighborhood have been meeting with the Applicant since October 2000 to discuss the existing and future noise environment and the aesthetic treatment of the 45th Street property boundary. Details of those discussions were mentioned by the residents at CEC workshops.

An April 12, 2001 community meeting was arranged by ESP II. A notice of the meeting was sent by US Mail to residents and owners within a 1000-foot radius of the property line. The Applicant presented sample concepts for a 20-foot wall, made of acoustically absorbent material, and a landscaped buffer that would serve as a visual separation between the industrial and residential uses. The wall would effectively replace the decommissioned fuel tanks from a noise perspective and substantially enhance the aesthetics of the southern property line.

In addition to the one-on-one discussions and the presentation of noise data and visual solutions on April 12, the CEC has designated the April

18 workshop as having a visual/noise focus. Residents will have the opportunity to comment again on the information and design solutions that are being explored by the ESP II. ESP II looks forward to continuing and completing the cooperative process that ensures that ESPR process will reflect community input and values.

BACKGROUND

The viewpoints selected for simulations in the AFC do not capture worst-case but frequently encountered views of the proposed project. In particular, two adjacent, heavily used viewing locations, Dockweiler Beach State Park and Pacific Coast Highway, regularly have very high numbers of sensitive viewers directly adjacent to (within 100 feet of) the project site. Staff requires visual simulations depicting such worst-case but very frequently encountered views experienced by beach visitors and travelers on PCH.

DATA REQUEST

108. Please provide five sets of high quality color photocopies of a photo of the existing site and simulation of the proposed plant from PCH at an immediate foreground distance (approximately half the distance depicted in Figure 5.13-8b). The view locations and lens setting should be selected to be as near to the plant as possible while including all major visible proposed structures (e.g., top of stacks). The photocopies need to be at life-size scale when viewed at a normal reading distance (approximately 18 inches) with a minimum vertical image dimension of 9". Please specify the lens setting used. Please also provide three CDs of electronic copies of the images.

Response No. 108: The requested new KOP is provided. Please refer to Figure 5.13-11A, *Existing View From KOP 8* and Figure 5.13-11B, *Simulated View From KOP 8*. This viewpoint is approximately half the distance depicted in Figure 5.13-8B. This view was taken using a Fuji G-617 Panoramic Camera with a 1:8/105 mm lenses, shot at f-16, 30th sec shutter speed.

109. Please provide five sets of 11' x 17" high quality color photocopies of a photo of the existing site and a simulation of the proposed plant from Dockweiler Beach at an immediate foreground distance (within 200-300 feet) as described under Request 10, i.e., as near as feasible while including all major visible structures. The photocopies need to be at life-size scale when viewed at a normal reading distance (approximately 18 inches) with a minimum vertical image dimension of 9". Please also provide three CDs of electronic copies of the images.

Response No. 109: The requested new KOP is provided Please refer to Figure 5.13-10A, *Existing View From KOP 7* and Figure 5.13-10B, *Simulated View From KOP 7*. This viewpoint was taken from the jetty immediately west of the proposed project site on Dockweiler Beach. This viewpoint was chosen to represent the best foreground view, while being able to include all of the major visible plant structures. The picture was taken using a Fuji G-617 Panoramic Camera with a 1:8/105 mm lenses, shot at f-16, 30th sec shutter speed.

BACKGROUND

The visible water vapor plume discussion provided in the Visual Resources section of the AFC (Section 5.13) does not provide enough information for staff to duplicate the modeling results summarized in Table 5.13-7. Additionally, Table 5.13-8 does not provide HRSG stack data for all three operating loads modeled by the Applicant, and staff believes that the stack diameter and water content provided in this table are not correct, and that the values given in this table could not have been modeled to obtain the results provided in Table 5.13-7. Previous experience shows water contents for combined cycle turbine exhausts to be around five to seven percent by weight rather than the fifteen percent by weight stated as in Table 5.13-8. Additionally, if the applicant did model plume frequencies using fifteen percent by weight water at the referenced exhaust temperature there would be considerably more hours with plume predicted than given in Table 5.13-7.

Staff will conduct a plume modeling analysis to replace the Applicants modeling results regarding the project's exhaust stack plume frequency and size characteristics, and staff will also model the existing plant's stack exhausts for current and post project conditions to determine the baseline plume conditions and post-project conditions. Staff will require additional project and site data to complete this analysis.

DATA REQUEST

110. Please provide the following information regarding the existing operating units' exhaust parameters and the proposed project exhaust parameters.

    a. Stack Exhaust Temperature;
    b. Moisture Content (% by Weight);
    c. Mass Flow (1000 lbs/hr), and;
    d. Average Molecular Weight (lbs/mole).

    The Applicant may provide these exhaust parameters, in tabular form, for the range of ambient conditions (i.e. ambient temperature and relative humidity)

and load conditions that can be reasonably expected occur at the project site location; or if the Applicant desires they may provide a worst case exhaust condition that staff will model throughout the year. If a single worst-case condition is supplied the applicant will provide information to verify the worst-case assumptions of that condition.

If for some reason the post project exhaust conditions for existing Units 3 and 4 will be different than existing conditions then please provide pre-project and post-project data for these stacks. All data provided should indicate units and be provided by stack name as appropriate for clarity.

Response No. 110: The results of the visible plume modeling analysis are summarized in Table 5.13-7 of the AFC. While the correct visible plume modeling results are shown in the AFC, the incorrect methodology for the analysis was inadvertently included in the visible plume modeling write-up (i.e., AFC Section 5.13.5.5). The following is a description of the visible plume modeling performed for the Project. As discussed below, the visible plume modeling was performed for the new equipment (i.e., gas turbines) and not the existing Units 3 and 4. As requested, the exhaust parameters for the existing Units 3 and 4 are also included below.

Overview – Visible Plume Analysis

The basic principle used to analyze the visible water droplet plumes for the ESPR Project involves modeling the dilution of a water vapor plume as a function of wind speed, distance, and stability class from the release point, similar to the Gaussian approach for modeling gaseous pollutants. As the plume is diluted, the temperature of the plume approaches ambient temperature, and the moisture content of the plume approaches the moisture content of the surrounding ambient air. At any given point along the plume, one can use the dilution factors to determine the plume temperature and moisture content, given knowledge of the temperature and moisture content of the plume at the time it leaves the release point, and of the temperature and moisture content of the ambient air. Knowing the temperature and moisture content of the plume at that point enables one to determine whether the moisture will condense at that point to form a visible water plume. By performing these calculations along a series of points, one can determine whether a visible plume will form and, if so, the length of the visible plume for each hour evaluated.

The modeling system includes the following components:

- A modified version of the Industrial Source Complex Short Term Model Version 3 (ISCST98356) is used to determine plume dilution through the evaluation of water droplet concentrations determined along a series of receptors placed along the plume centerline. These calculations are performed for each hour of the year using a standard modeling meteorological data set.
- A second module, CLAUSIUS, determines the amount of dilution of the plume that is required for the visible plume to evaporate.
- A third module, DISTANCE, determines the distance (along the plume centerline) that the plume is visible.
- A fourth module, COUNT, summarizes the statistics and prints a report.

Each of these components is discussed in more detail below.

Modified ISCST3

ISCST3 was modified to provide for the determination of pollutant concentrations along the centerline of a plume. The centerline of the plume is represented by flagpole receptors along a single radial from the stack. The model produces an output file, which includes concentrations for each receptor along the radial for each hour of the year. Relative to the concentration present in the stack, the concentrations reported at each receptor represent the degree of dilution of the plume with ambient air at that point. The modified version of ISCST3 has the following features:

- Calculations can be performed for up to 100 receptors placed along the centerline of the plume.
- Default ISCST3 features that prevent calculations of pollutant concentrations at locations close to the emission source have been disabled.
- To avoid ignoring meteorological conditions where visible plumes are likely to be formed, wind speeds of less than 1.0 m/s are set to a wind speed of 1.0 m/s, to avoid implementing the calms processing feature of ISCST3.
- Concentrations are calculated regardless of whether the plume height lies above or below the mixing height.
- Calculations are performed for only simple terrain.
- Calculations are performed for only a single source.

Meteorological data from Lennox for the 1981 calendar year, obtained from the South Coast Air Quality Management District (SCAQMD), were used for the plume visibility analysis. Sounding data, which are

included in the SCAQMD data set, are from the Los Angeles Airport. Relative humidity data from the Los Angeles Airport (i.e., 1981) was used for the analysis.

CLAUSIUS

The CLAUSIUS module uses a linear interpolation of water vapor pressure, between the stack exit and ambient conditions, together with the Goff-Gratch formulation of the Clausius-Clapeyron equation for water vapor, to determine the amount of dilution required for the visible plume to not be visible. These calculations are performed for each hour of the year, using the same meteorological data set used for the ISCST3 dispersion modeling analysis. The CLAUSIUS program can perform calculations for various types of sources:

- Sources with a fixed exit temperature
- Sources with exit temperatures at a constant increment above ambient temperatures
- Sources with a fixed moisture content
- Sources where moisture content is a function of ambient temperature
- Sources with a moisture content fixed at a specified relative humidity, given an ambient temperature
- Sources with diurnal cycles of temperature and water content

In this regard, the modeling system can be somewhat more versatile than other models typically used to evaluate visible water plumes, such as SACTIP (Seasonal/Annual Cooling Tower Impact Program), since combustion sources as well as cooling towers can be treated.

DISTANCE

The DISTANCE module uses the resulting output from ISCST3 and CLAUSIUS to determine the distance along the centerline of the plume where sufficient dilution has occurred such that the plume is no longer visible.

COUNT

The COUNT module summarizes and prints the statistics regarding plume visibility. Available statistical outputs include the number and frequency of hours in which a plume is visible, separately for daytime and nighttime conditions, as well as a frequency distribution of visible

plume lengths. The day/night boundary is treated as sunrise/sunset, calculated for every day of the year.

Assumptions

The following exhaust characteristics were derived from data provided by the project's design engineering firm, and reflect worst-case conditions. (Low ambient temperatures, often accompanied by high relative humidity are most likely to be associated with the formation of a visible water plume; turbine fuel consumption is highest at low ambient temperatures.) Please note that for the gas turbine/HRSG full load operation case the high moisture content of 15.53% by volume is due to the use of steam power augmentation and a 600 MMBtu/hr duct burner. Typical exhaust moisture contents for gas turbines without power augmentation and large duct burners range from 7% to 9% by volume.

Exhaust Characteristics For New Equipment ESPR Project	
HRSG Stack (full load operation) With Duct Burner and Power Augmentation	
Stack gas exit temperature	442.39 deg. K
Stack diameter	5.791 m
Stack gas exit velocity	24.04 m/s
Stack gas moisture content	15.53% vol.
Stack gas mass flow	3,819,342 lbs/hr
Stack gas average molecular weight	27.61 lbs/lb-mol (wet)
HRSG Stack (full load operation) Without Duct Burner and Power Augmentation	
Stack gas exit temperature	368.56 deg. K
Stack diameter	5.791 m
Stack gas exit velocity	19.90 m/s
Stack gas moisture content	8.00% to 9.01%vol. (extrapolated each hour depending on ambient temperature)
Stack gas mass flow	3,895,776 lbs/hr
Stack gas average molecular weight	28.35 lbs/lb-mol (wet)
HRSG Stack (50% load operation) Without Duct Burner and Power Augmentation	
Stack gas exit temperature	352.78 deg. K
Stack diameter	5.791 m
Stack gas exit velocity	12.08 m/s
Stack gas moisture content	7.79% to 8.55%vol. (extrapolated each hour depending on ambient temperature)
Stack gas mass flow	2,462,156 lbs/hr
Stack gas average molecular weight	28.26 lbs/lb-mol (wet)

Interpretation of Results

The water droplet plume visibility analysis is an approximation technique, which should not be used to establish limiting conditions for the operation of a facility or a particular piece of equipment. The following caveats should be observed in interpreting the model results:

- Meteorological conditions reflecting low mixing heights may not necessarily be properly modeled. Little data are available regarding temperatures and relative humidity levels above the mixing height at any particular location, such as Indio, and the plume is no longer in a well-mixed surface layer.

- The model is least reliable at predicting plume visibility under calm nighttime conditions, since both temperature and relative humidity vary strongly with height under those conditions. What is

measured at the meteorological station (at a height of 10 meters) may vary considerably from actual conditions at plume height. In general, under cold, nighttime conditions (with shallow radiation inversions), temperatures are likely to be colder, and relative humidity higher, at the height of the meteorological monitor than at plume height, thus resulting in an overstatement of plume visibility during these conditions.

- Latent heat release and absorption are not treated in the modeling system. These effects are likely to be of secondary importance for combustion plumes traveling for relatively short distances, but may play a more important role for cooling tower plumes. Condensation of water droplets in the plume will cause the plume to increase in temperature, while evaporation of those droplets will subsequently cool the plume by a similar amount. These effects are likely to be negligible in the case of combustion sources, where the plume temperature is already 100°F (or more) warmer than the surrounding ambient air. The effect of ignoring latent heat release and absorption is to slightly underestimate initial plume rise, and slightly underestimate plume length.

- The model results are extremely sensitive to assumptions regarding ambient and stack gas moisture content and relative humidity (as is actual plume visibility). Furthermore, it is not clear that the accuracy of the relative humidity monitors is suitable for the use to which the data are being applied.

- The modeling system does not have the capacity of distinguishing foggy hours from other hours. Since the identification of foggy hours is frequently absent from the meteorological databases commonly used for modeling, the capacity to identify foggy hours has not been incorporated into the modeling system.

Modeling Results

The following table summarizes the hour-by-hour modeling results.

Visible Plume Modeling Results ESPR Project			
	Full Load With Duct Burner and Power Augmentation	Full Load Without Duct Burner and Power Augmentation	50% Load Without Duct Burner and Power Augmentation
Total number of hours with visible plume	5	3	19
Number of Daylight Hours with visible plume	2	1	4
Number of Nighttime Hours with visible plume	3	2	15
Maximum Plume Height (meters)	*	*	162
Average Plume Height (meters)	*	*	8
Maximum Plume Diameter (meters)	41-83**	41-83**	53
Average Plume Diameter (meters)	24-35**	24-35**	3

Notes:

* Meteorological conditions result in a theoretical unlimited plume height.
** Range of nominal plume diameters for a similar project.

Stack Parameters for Existing Units 3 and 4

The following are the exhaust parameters for the existing Units 3 and 4.

Exhaust Characteristics For Existing Units 3 and 4 ESPR Project	
Stack gas exit temperature	390.78 deg. K
Stack diameter	6.452 m
Stack gas exit velocity	15.39 m/s
Stack gas moisture content	15.55 % vol.
Stack gas mass flow rate	3,071,202 lbs/hr
Stack gas average molecular weight	29.62 lb/lb-mol (dry)

111. Please provide hourly meteorological data files from a meteorological monitoring station located near the project site that includes, at a minimum, the following parameters:

    e. Year, Month, Day, Hour
    f. Ambient Temperature and Relative Humidity
    g. Wind Speed and Wind Direction (from Direction)
    h. Stability Class

    A minimum of five sequential years should be provided. Additional meteorological parameters, such as fog or other visibility obscuring phenomena (i.e. rain, haze), should be provided if available (as is found in HUSWO data). Please provide the meteorological data files in an ASCII space delimited, or spreadsheet, form for ease of use. Also, please provide the name and location (in UTM or other standard coordinate system) of the meteorological data station. The Applicant should also provide a copy of the meteorological data that they used in their initial modeling assessment if different from the meteorological data provided to meet the requirements of this data request.

    Staff currently has a six-year (1990 through 1995) data set from a Long Beach monitoring station that can be used if the applicant considers Long Beach data to be reasonably representative of the site in El Segundo, or if no better data source is available. However, staff believes that appropriate meteorological data is likely to be available from meteorological station(s) located at LAX.

    Please provide any available information regarding prior complaints about the existing exhaust stack visual plumes that have been received by the Applicant, the City of El Segundo, or SCAQMD.

Response No. 111: As discussed in the response to Data Request 110, the visible plume analysis for the ESPR project was performed using meteorological data from Lennox for the 1981 calendar year, obtained from the South Coast Air Quality Management District (SCAQMD). Sounding data, which are included in the SCAQMD data set, are from Los Angeles Airport. Mixing ratio data were derived from 1981 Los Angeles Airport surface temperature and relative humidity data. The 1981 Lennox meteorological data was submitted to the CEC in electronic format as part of the AFC. The 1981 Los Angeles Airport hourly relative humidity data are enclosed in electronic format on a compact disk.

CCC-22. Section 5.13 Visual Resources – We concur with the applicant's stipulated conditions in the AFC. We also concur with the Energy Commission's request for additional data regarding visual impacts of vapor plumes associated with the facility and whether the existing and proposed facility complies with

applicable Local Coastal Plans. We recommend that the Energy Commission obtain, as part of its review, a statement from the City of El Segundo regarding the compliance of the existing and proposed facility with the City's Local Coastal Plan. If the City finds the facility not in compliance and can provide conditions that would allow the facility to comply, we recommend the Energy Commission include those conditions as part of any site certification.

Response No. CCC-22: Comment noted.

TECHNICAL AREA: WASTE MANAGEMENT

SUMMARY OF WASTE MANAGEMENT DATA REQUESTS AND RESPONSES

Since filing the Application for Certification, Waste Management was the subject of a data request which was answered. ESP II believes that ESPR complies with all applicable Laws, Ordinances, Regulations, and Standards for Waste Management, and has no unmitigated significant impacts.

The following Data Requests have been received regarding Waste Management:

Data Request	Applicant's Response Date	Source of Data Request	Page
CCC-23	April 18	CCC	WM-2

TECHNICAL AREA: WASTE MANAGEMENT
AUTHOR: CALIFORNIA COASTAL COMMISSION

CCC-23. Section 5.14 Waste Management – The AFC states that contaminated groundwater is likely to be encountered during site preparation and that pumping will be required to draw down the groundwater to levels suitable to complete construction. Pumping rates are anticipated to be from 300 to 500 gallons per minute (for a total of 13 to 65 million gallons during the construction period), if one of two types of sheet piles is installed to reduce connectivity from adjacent areas. Pumped groundwater is then proposed to be treated using a granular activated carbon (GAC) system before being discharged to unspecified receiving waters (presumed to be Santa Monica Bay). This groundwater is likely to exceed discharge limitations for several contaminants, including some noted as reasons for impairment of Santa Monica Bay. The AFC states that a project-specific NPDES permit will likely be required for this proposed discharge, since the discharge is not likely to meet the conditions of the General NPDES Permit for Discharges of Treated Groundwater from Construction and Project Dewatering issued by the Los Angeles Regional Water Quality Control Board (LARWQCB).

The applicant should provide additional information about the effectiveness of the proposed treatment system to remove contaminants to an acceptable level. Also, given the current 303(d) listing of Santa Monica Bay, the applicant should also discuss the possibility that the proposed treatment will not be adequate to meet discharge requirements necessary to protect biological resources pursuant to state and federal water quality effluent limitations and the California Ocean Plan.

Response No. CCC-23: The Applicant has reviewed available groundwater data from previous groundwater monitoring events conducted at ESGS. These data were discussed in Appendix S (draft Waste Management Plan) and Appendix T (Phase I Environmental Site Assessment) of the AFC. Chevron El Segundo's 2000 annual groundwater monitoring report, which summarizes the water quality beneath the Chevron Refinery and ESGS, was also provided to CCC as a reference document in December 2000. Based on review of discrete sample data from individual groundwater wells in the vicinity of the ESGS Units 1 and 2, it was assumed for the AFC and for planning purposes that ***untreated*** groundwater extracted during construction dewatering would not meet the volatile organic compound (VOC) limits that are provided in the LARWQCB's General NPDES Permit for Discharges of Treated Groundwater from Construction and Project Dewatering. No other

chemicals of concern in groundwater that require mitigation have been identified by the LARWQCB beneath ESGS.

The General NPDES Permit reference above is typically intended to be protective of inland waters. Because treated groundwater from construction dewatering would be discharged directly to the Santa Monica Bay, the California Ocean Plan conditions would be more applicable to the discharge of water generated during construction dewatering.

For the AFC, it was anticipated that groundwater will be extracted at rates of 300 to 500 gpm. At these high extraction rates, it is anticipated that the concentrations of VOCs identified in groundwater beneath ESGS will be considerably less (i.e., due to mixing with deeper water) than water quality depicted by the discrete samples collected from individual wells. Prior to demolition of Units 1 and 2, the Applicant will conduct a pump test to better estimate the total extraction rate. The water extracted during the pump test will be sampled to estimate the water quality during construction dewatering conditions. These data will then used for the design of the construction dewatering treatment system, assuming that the water quality of untreated groundwater will exceed the California Ocean Plan.

The Applicant is proposing GAC to remove VOCs to California Ocean Plan conditions. Groundwater treatment using GAC is a proven technology with a demonstrated history of removing VOCs to approximately 99 percent, depending on the specific compound and the number of GAC-containing vessels. For example, 100 parts per billion (ppb) of benzene in groundwater would be removed to less than 1 ppb. The planned treatment process would include multiple GAC-containing vessels to improve the removal efficiency to better than 99 percent if necessary, and to provide a safety factor in the event that any one GAC-containing vessel reaches it life span for VOC mass removal. The treatment process would also include filtration of suspended solids prior to GAC so as to minimize the possibility of reduced GAC-removal efficiency. These processes are discussed in the draft Waste Management Plan (Appendix S). Thus, the proposed treatment technology is capable of mitigating VOCs detected beneath ESGS to below California Ocean Plan conditions. The removal of VOCs from groundwater generated during construction dewatering would ensure that this water would meet the California Ocean Plan, thereby minimizing the potential impairment of the Santa Monica Bay and the biological resources in accordance with state and federal effluent limitations. The technology may be designed to meet the LARWQCB's

General NPDES Permit conditions. Demonstration that the technology will meet the project-specific discharge limitations will be conducted before operation of the dewatering system.

TECHNICAL AREA: WORKER SAFETY

SUMMARY OF WORKER SAFETY DATA REQUESTS AND RESPONSES

A data request was asked answered regarding worker safety. ESP II is confident that ESPR complies with all applicable Laws, Ordinances, Regulations, and Standards, and has no unmitigated significant impacts to worker safety issues.

The following Data Requests have been received regarding Worker Safety:

Data Request	Applicant's Response Date	Source of Data Request	Page
132	April 18	CEC	WS-2

TECHNICAL AREA: WORKER SAFETY
AUTHOR: RICK TYLER

BACKGROUND

Section 5.17.2 indicates a Fire Protection Plan would be developed and implemented during construction and plant operation. It does not indicate whether the Applicant would be negotiating a first responder agreement with the City of El Segundo Fire Department for confined space and elevated height incidents as part of this Plan.

DATA REQUEST

132. Please clarify whether such agreements would be obtained and indicate the timelines.

Response No. 132: El Segundo Fire Department has visited to the station to perform inspections and to familiarize themselves with the station. They have also performed training exercises consisting of rappelling from the upper levels of the boiler and simulating rescues.

Presently there is no signed agreement in place with the City of El Segundo Fire Department; as stated in the station's Contingency Plan, the station will call 911 for assistance in cases of emergencies.

Prior to construction and operations of the ESPR Project, the Applicant will update the existing Fire Protection Plan in coordination with the El Segundo Fire Department. During this process, appropriate response equipment and procedures will be identified and implemented to account for the ESPR Project.